

| L Number | Hits | Search Text   | DB                 | Time stamp       |
|----------|------|---|--------------------|------------------|
| 1        | 6002 | (indol or indolyl) and (piperidinyl or tetrahydropyridin or tetrahydropyridine)                             | USPAT;<br>US-PGPUB | 2003/06/09 13:43 |
| 2        | 726  | ((indol or indolyl) and (piperidinyl or tetrahydropyridin or tetrahydropyridine)) and (serotonin or '5-HT') | USPAT;<br>US-PGPUB | 2003/06/09 13:45 |

EAST

10/053,168

1/2

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NEWS 5 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)  
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NEWS 7 Sep 03 JAPIO has been reloaded and enhanced  
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NEWS 10 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985  
NEWS 11 Oct 24 BEILSTEIN adds new search fields  
NEWS 12 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN  
NEWS 13 Nov 18 DKILIT has been renamed APOLLIT  
NEWS 14 Nov 25 More calculated properties added to REGISTRY  
NEWS 15 Dec 04 CSA files on STN  
NEWS 16 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date  
NEWS 17 Dec 17 TOXCENTER enhanced with additional content  
NEWS 18 Dec 17 Adis Clinical Trials Insight now available on STN  
NEWS 19 Jan 29 Simultaneous left and right truncation added to COMPENDEX,  
ENERGY, INSPEC  
NEWS 20 Feb 13 CANCERLIT is no longer being updated  
NEWS 21 Feb 24 METADEX enhancements  
NEWS 22 Feb 24 PCTGEN now available on STN  
NEWS 23 Feb 24 TEMA now available on STN  
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation  
NEWS 25 Feb 26 PCTFULL now contains images  
NEWS 26 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results  
NEWS 27 Mar 20 EVENTLINE will be removed from STN  
NEWS 28 Mar 24 PATDPAFULL now available on STN  
NEWS 29 Mar 24 Additional information for trade-named substances without  
structures available in REGISTRY  
NEWS 30 Apr 11 Display formats in DGENE enhanced  
NEWS 31 Apr 14 MEDLINE Reload  
NEWS 32 Apr 17 Polymer searching in REGISTRY enhanced  
NEWS 33 Apr 21 Indexing from 1947 to 1956 being added to records in CA/CAPLUS  
NEWS 34 Apr 21 New current-awareness alert (SDI) frequency in  
WPIDS/WPINDEX/WPIX  
NEWS 35 Apr 28 RDISCLOSURE now available on STN  
NEWS 36 May 05 Pharmacokinetic information and systematic chemical names  
added to PHAR  
NEWS 37 May 15 MEDLINE file segment of TOXCENTER reloaded  
NEWS 38 May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated  
NEWS 39 May 16 CHEMREACT will be removed from STN  
NEWS 40 May 19 Simultaneous left and right truncation added to WSCA  
NEWS 41 May 19 RAPRA enhanced with new search field, simultaneous left and  
right truncation  
NEWS 42 Jun 06 Simultaneous left and right truncation added to CBNB  
NEWS 43 Jun 06 PASCAL enhanced with additional data

10/ 053,168

NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
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FILE 'HOME' ENTERED AT 12:05:21 ON 07 JUN 2003

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 12:05:34 ON 07 JUN 2003

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STRUCTURE FILE UPDATES: 6 JUN 2003 HIGHEST RN 526915-11-7

DICTIONARY FILE UPDATES: 6 JUN 2003 HIGHEST RN 526915-11-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when  
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Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>

Uploading 10053168.str

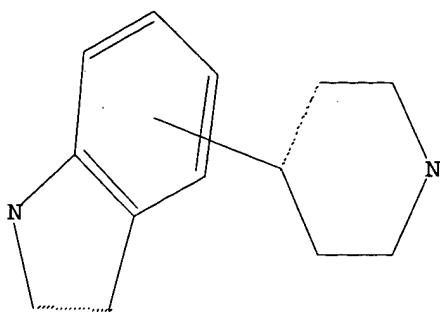
L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

10/ 053,168



Structure attributes must be viewed using STN Express query preparation.

=> s l1 ful

FULL SEARCH INITIATED 12:05:55 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - >1,000,000 TO ITERATE

< 38.7% PROCESSED 400000 ITERATIONS

174 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.06

FULL FILE PROJECTIONS: ONLINE \*\*INCOMPLETE\*\*

BATCH \*\*INCOMPLETE\*\*

PROJECTED ITERATIONS: EXCEEDS 1000000

PROJECTED ANSWERS: EXCEEDS 386

L2 174 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

148.15

148.36

FILE 'CAPLUS' ENTERED AT 12:06:06 ON 07 JUN 2003

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FILE COVERS 1907 - 7 Jun 2003 VOL 138 ISS 24

FILE LAST UPDATED: 6 Jun 2003 (20030606/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l2

L3

35 L2

=&gt; d l3 1- ibib abs hitstr

YOU HAVE REQUESTED DATA FROM 35 ANSWERS - CONTINUE? Y/(N):y

L3 ANSWER 1 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:261828 CAPLUS

DOCUMENT NUMBER: 138:287668

TITLE: Preparation of substituted 3-pyridyl indoles and indazoles as C17,20 lyase inhibitors

INVENTOR(S): Ladouceur, Gaetan H.; Burke, Michael J.; Wong, Wai C.; Bierer, Donald

PATENT ASSIGNEE(S): Bayer Corporation, USA

SOURCE: PCT Int. Appl., 73 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2003027094 | A2   | 20030403 | WO 2002-US30482 | 20020926 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

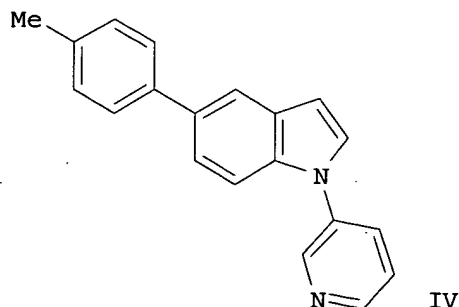
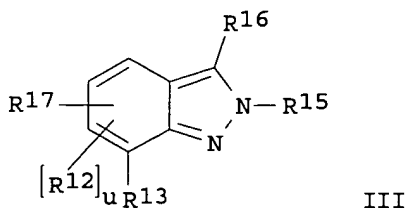
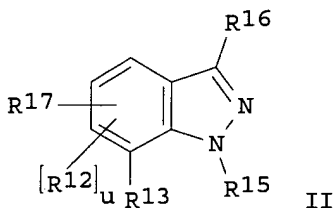
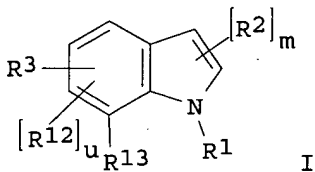
PRIORITY APPLN. INFO.:

US 2001-324993P P 20010926

OTHER SOURCE(S):

MARPAT 138:287668

GI



AB The title compds. [I (wherein R1 = (un)substituted pyridyl, pyridyl N-oxide, Ph; R2 = alkyl; m = 0-2; R3 = (un)substituted pyridyl, pyridyl N-oxide, Ph, etc.; R12 = alkyl, alkoxy, halo, etc.; u = 0-2; one of R1 and R3 is a 3-pyridyl or 3-pyridyl N-oxide which is unsubstituted at the 2- and 6- positions), II, III (wherein R12 = alkyl, alkoxy, halo, etc.; R13 = H, R12; R15 = (un)substituted pyridyl, pyridyl N-oxide; R16 = H, alkyl; R17 = (un)substituted pyridyl, Ph; one of R15 and R17 is a 3-pyridyl or 3-pyridyl N-oxide which is unsubstituted at the 2- and 6- positions)], useful as inhibitors of lyases, e.g., the 17.alpha.-hydroxylase-C17,20 enzyme, for treating prostate cancer or breast cancer, were prepd. Thus, coupling 5-bromo-1-(3-pyridyl)-1H-indole (prepn. given) with 4-methylphenylboronic acid in the presence of Pd(PPh3)4 and Na2CO3 in DME afforded the indole IV. All compds. tested have IC50 in the human C17,20 biochem. assay or the human C17,20 cellular assay of less than 10 .mu.M.

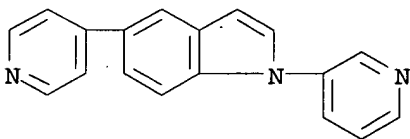
IT 504424-27-5P 504424-47-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 3-pyridyl indoles and indazoles as C17,20 lyase inhibitors)

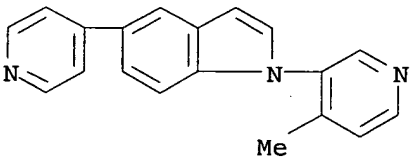
RN 504424-27-5 CAPLUS

CN 1H-Indole, 1-(3-pyridinyl)-5-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 504424-47-9 CAPLUS

CN 1H-Indole, 1-(4-methyl-3-pyridinyl)-5-(4-pyridinyl)- (9CI) (CA INDEX NAME)



L3 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:5957 CAPLUS

DOCUMENT NUMBER: 138:55984

TITLE: Preparation of azaindoles as protein kinase inhibitors  
INVENTOR(S): Cox, Paul Joseph; Majid, Tahir Nadeem; Lai, Justine Yeun Quai; Morley, Andrew; Amendola, Shelley; Deprets, Stephanie Daniele; Edlin, Chris; Gardner, Charles J.; Kominos, Dorothea; Pedgrift, Brian Leslie; Halley, Frank; Gillespy, Timothy Alan; Edwards, Michael; Clerc, Francois Frederic; Nemecek, Conception; Houille, Olivier; Damour, Dominique; Bouchard, Herve; Bezard, Daniel; Carrez, Chantal

PATENT ASSIGNEE(S): Aventis Pharma Limited, UK

SOURCE: PCT Int. Appl., 373 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

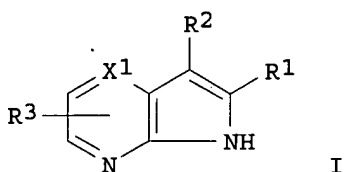
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2003000688   | A1   | 20030103 | WO 2002-GB2799  | 20020620   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| PRIORITY APPLN. INFO.:  |      |          | GB 2001-15109   | A 20010621 |
|   |      |          | US 2001-300257P | P 20010622 |

OTHER SOURCE(S): MARPAT 138:55984  
GI



AB The invention is directed to physiologically active azaindoles (shown as I; variables defined below; e.g. 6-(5-methoxy-1-methyl-1H-indol-3-yl)-5H-pyrrolo[2,3-b]pyrazine) and compounds containing such compounds; and their prodrugs, and pharmaceutically acceptable salts and solvates of such compounds and their prodrugs. Such compounds and compounds have valuable pharmaceutical properties, in particular the ability to inhibit kinases, esp. Syk, FAK, KDR, Aurora2 and IGF1R (data given in general rather than for specific I). Although the methods of preparation are not claimed, >100 example preparations of intermediates and I are included. For I: R1 = aryl or heteroaryl each optionally substituted by  $\text{gtoreq.1}$  groups = alkylendioxy, alkenyl, alkenyloxy, alkynyl, aryl, cyano, halo, hydroxy, heteroaryl, heterocycloalkyl, nitro, R4, -C(O)R, -C(O)OR5, -C(O)NY1Y2, -NY1Y2, -N(R6)C(O)R7, -N(R6)C(O)NY3Y4, -N(R6)C(O)OR7, -N(R6)SO2R7, -N(R6)SO2NY3Y4, -SO2NY1Y2 and -Z2R. R2 = H, acyl, cyano, halo, lower alkenyl, -Z2R4, -SO2NY3Y4, -NY1Y2 or lower alkyl optionally substituted by aryl, cyano, heteroaryl, heterocycloalkyl, hydroxy, -Z2R4, -C(O)NY1Y2, -C(O)R, -CO2R8, -NY3Y4, -N(R6)C(O)R, -N(R6)C(O)NY1Y2, -N(R6)C(O)OR7, -N(R6)SO2R7, -N(R6)SO2NY3Y4, -SO2NY1Y2 and  $\text{gtoreq.1}$  halogen atoms. R3 = H, aryl, cyano, halo, heteroaryl, lower alkyl, -Z2R4, -C(O)OR5 or -C(O)NY3Y4. R4 = alkyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl or heterocycloalkylalkyl each optionally substituted by aryl, cycloalkyl, cyano, halo, heteroaryl, heterocycloalkyl, -CHO (or a 5- 6- or 7-membered cyclic acetal deriv. thereof), -C(O)NY1Y2, -C(O)OR5, -NY1Y2, -N(R6)C(O)R7, -N(R6)C(O)NY3Y4, -N(R6)SO2R7, -N(R6)SO2NY3Y4, -Z3R7 and  $\text{gtoreq.1}$  hydroxy, alkoxy and carboxy. R5 = H, alkyl, alkenyl, aryl, arylalkyl, heteroaryl or heteroarylalkyl. R6 = H or lower alkyl; R7 = alkyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heteroarylalkyl, heterocycloalkyl or heterocycloalkylalkyl; R8 = H or lower alkyl. R = aryl or heteroaryl; alkenyl; or alkyl, cycloalkyl, cycloalkylalkyl, heterocycloalkyl or heterocycloalkylalkyl each optionally substituted by aryl, cycloalkyl, cyano, halo, heteroaryl, heterocycloalkyl, -CHO (or a 5- 6- or 7-membered cyclic acetal deriv. thereof), -C(O)NY1Y2, -C(O)OR5, -NY1Y2, -N(R6)C(O)R7,

-N(R6)C(O)NY3Y4, -N(R6)SO2R7, -N(R6)SO2NY3Y4, -Z3R7 and .gtoreq.1 hydroxy, alkoxy and carboxy. X1 = N, CH, C-aryl, C-heteroaryl, C-heterocycloalkyl, C-heterocycloalkenyl, C-halo, C-CN, C-R4, CNY1Y2, COH, CZ2R, CC(O)R, CC(O)OR5, CC(O)NY1Y2, CN(R8)C(O)R, CN(R6)C(O)OR7, CN(R6)C(O)NY3Y4, CN(R6)SO2NY3Y4, CN(R6)SO2R, CSO2NY3Y4, C-NO2, or C-alkenyl or C-alkynyl optionally substituted by .gtoreq.1 aryl, cyano, halo, hydroxy, heteroaryl, heterocycloalkyl, nitro, -C(O)NY1Y2, -C(O)OR5, -NNY1Y2, -N(R6)C(O)R7, -N(R6)C(O)NY3Y4, -N(R6)C(O)OR7, -N(R6)SO2R7, -N(R6)SO2NY3Y4, -SO2NY1Y2 and -Z2R4. Y1 and Y2 = H, alkenyl, aryl, cycloalkyl, heteroaryl or alkyl optionally substituted by .gtoreq.1 aryl, halo, heteroaryl, heterocycloalkyl, hydroxy, -C(O)NY3Y4, -C(O)OR5, NY3Y4, -N(R6)C(O)R7, -N(R6)C(O)NY3Y4, -N(R6)SO2R7, -N(R6)SO2NY3Y4 and -OR7, or the group -NY1Y2 may form a cyclic amine. Y3 and Y4 = H, alkenyl, alkyl, aryl, arylalkyl, cycloalkyl, heteroaryl or heteroarylalkyl; or the group -NY3Y4 may form a cyclic amine; Z1 = O or S; Z2 = O or S(O)n; Z3 = O, S(O)n, NR6; n = 0-2.

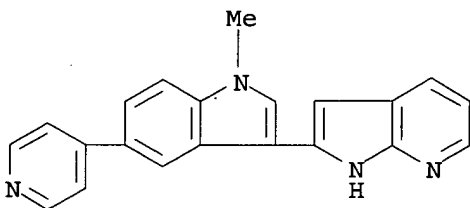
IT 348639-47-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; prepn. of azaindoles as protein kinase inhibitors with therapeutic uses)

RN 348639-47-4 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine, 2-[1-methyl-5-(4-pyridinyl)-1H-indol-3-yl]- (9CI) (CA INDEX NAME)



IT 348639-46-3P, 2-[5-(Pyridin-4-yl)-1-methyl-1H-indol-3-yl]-1-

(toluene-4-sulfonyl)-1H-pyrrolo[2,3-b]pyridine 348640-91-5P, 2-[5-(1-Benzyloxycarbonyl-1,2,5,6-tetrahydropyridin-4-yl)-1-methyl-1H-indol-3-yl]-1-(toluene-4-sulfonyl)-1H-pyrrolo[2,3-b]pyridine

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of azaindoles as protein kinase inhibitors with therapeutic uses)

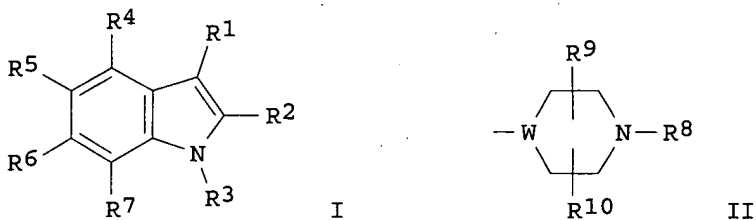
RN 348639-46-3 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine, 1-[(4-methylphenyl)sulfonyl]-2-[1-methyl-5-(4-pyridinyl)-1H-indol-3-yl]- (9CI) (CA INDEX NAME)





OTHER SOURCE(S) :  
GI

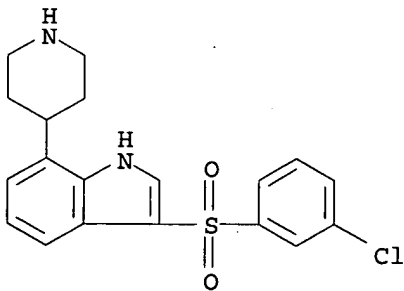


AB The title compds. [I; R1 = S(O)0-2A, COA, (CH2)0-1A (wherein A = (un)substituted aryl, heteroaryl); R2 = H, alkyl, alkoxy, alkylthio; R3 = H, alkyl; R4 = H, halo, alkyl, alkoxy, alkylthio, etc.; one of R5-R7 = II (wherein W = CH, N; R8-R10 = H, alkyl; or R8 and R9 together may form alkylene) and the others = H, halo, alkyl, etc.] and their pharmaceutically acceptable salts which have generally 5-HT6 receptor affinity, were prepd. and formulated. E.g., a 6-step synthesis of I.HCl [R1 = SO2Ph; R2-R6 = H; R7 = piperazino], starting with 3-methyl-2-nitrophenol, which showed pKi of 9.28 against 5-HT6 receptor binding, was given.

IT 478082-67-6P 478082-68-7P 478082-95-0P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of new indoles with 5-HT6 receptor affinity)

RN 478082-67-6 CAPLUS

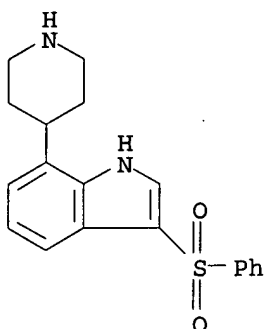
CN 1H-Indole, 3-[(3-chlorophenyl)sulfonyl]-7-(4-piperidinyl)- (9CI) (CA INDEX NAME)



10/ 053,168

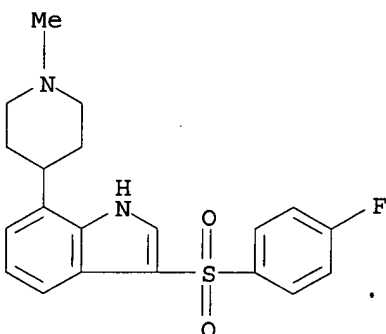
RN 478082-68-7 CAPLUS

CN 1H-Indole, 3-(phenylsulfonyl)-7-(4-piperidinyl)- (9CI) (CA INDEX NAME)



RN 478082-95-0 CAPLUS

CN 1H-Indole, 3-[(4-fluorophenyl)sulfonyl]-7-(1-methyl-4-piperidinyl)- (9CI)  
(CA INDEX NAME)



IT 478083-12-4P 478083-13-5P 478083-14-6P

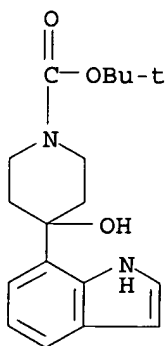
478083-19-1P 478083-20-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(prepn. of new indoles with 5-HT<sub>6</sub> receptor affinity)

RN 478083-12-4 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-hydroxy-4-(1H-indol-7-yl)-,  
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

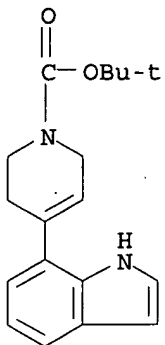


RN 478083-13-5 CAPLUS

CN 1(2H)-Pyridinecarboxylic acid, 3,6-dihydro-4-(1H-indol-7-yl)-,

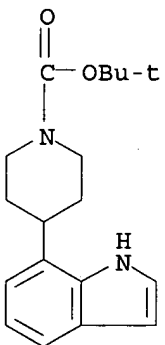
10/ 053,168

1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



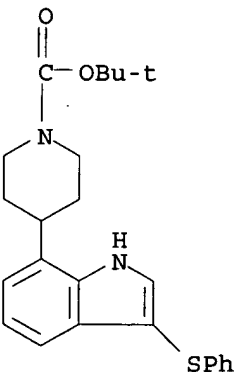
RN 478083-14-6 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-(1H-indol-7-yl)-, 1,1-dimethylethyl ester  
(9CI) (CA INDEX NAME)



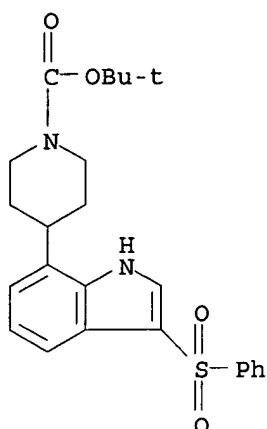
RN 478083-19-1 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-[3-(phenylthio)-1H-indol-7-yl]-,  
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 478083-20-4 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-[3-(phenylsulfonyl)-1H-indol-7-yl]-,  
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:921906 CAPLUS

DOCUMENT NUMBER: 138:4519

TITLE: Preparation of arylhydrazines and substituted indoles from aromatic compounds and hydrazones.

INVENTOR(S): Hicks, Frederick; Gou, Da-Ming; Marchese, Salvatore Anthony; Martel, Lawrence J.; Necula, Atena; Benetti, Richard E.; Silva, Richard A.

PATENT ASSIGNEE(S): Rhodia Chirex Inc., USA

SOURCE: U.S., 10 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| US 6489512             | B1   | 20021203 | US 2002-177381  | 20020621 |
| PRIORITY APPLN. INFO.: |      |          | US 2002-177381  | 20020621 |

OTHER SOURCE(S): CASREACT 138:4519

AB Arylhydrazines were prepd. by (a) reacting a substrate arom. compd. bearing an activated C atom and a hydrazone in the presence of a transition metal catalyst to form an aryl hydrazone having a new C-N bond between the activated C of the substrate arom. compd. and a N atom of the hydrazone, and (b) hydrolyzing the aryl hydrazone. Thus, Pd(OAc)<sub>2</sub>, 2-dicyclohexylphosphino-2'-(N,N-dimethylamino)biphenyl, Na tert-butoxide, 4-(1-aza-1-methylcyclohex-3-en-4-yl)-1-chlorobenzene (prepn. given), and benzophenone hydrazone were heated in PhMe at 80.degree. for 20 h to give 76% 4-(1-aza-1-methylcyclohex-3-en-4-yl)phenyl benzophenone hydrazone. The latter was heated with ethanolic HCl at 100.degree. for 25 min. to give 93.6% 4-(1-aza-1-methylcyclohex-3-en-4-yl)phenylhydrazine hydrochloride. This in H<sub>2</sub>O/EtOH was treated with 4-(N,N-dimethylamino)butyral di-Me acetal then with CF<sub>3</sub>CO<sub>2</sub>H followed by stirring for 6 h at 55.degree. to give 5-(1-aza-1-methylcyclohex-3-en-4-yl)-3-(2-dimethylaminoethyl)-1H-indole hydrochloride.

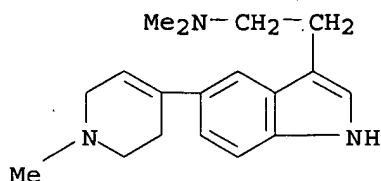
IT 251967-66-5P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of arylhydrazines and substituted indoles from arom. compds. and hydrazones)

RN 251967-66-5 CAPLUS

CN 1H-Indole-3-ethanamine, N,N-dimethyl-5-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:716249 CAPLUS

DOCUMENT NUMBER: 137:232553

TITLE: Preparation of functionalized indoles, benzimidazolones and related heterocycles as modulators of CCR-5 chemokine receptor and use in treating patients with HIV

INVENTOR(S): Harriman, Geraldine C. B.; Carson, Kenneth G.; Flynn, Daniel L.; Solomon, Michael E.; Song, Yuntao; Trivedi, Bharat K.; Roth, Bruce D.; Kolz, Christine N.; Pham, Ly; Sun, Kuai-Lin

PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., USA; Warner-Lambert Company

SOURCE: PCT Int. Appl., 307 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

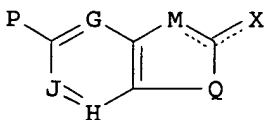
PATENT INFORMATION:

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| WO 2002072549 | A1   | 20020919 | WO 2002-US7559  | 20020312 |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |          |
| RW:           | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
| US 2003064991 | A1   | 20030403 | US 2002-96361   | 20020312 |

PRIORITY APPLN. INFO.: US 2001-275248P P 20010312

OTHER SOURCE(S): MARPAT 137:232553

GI



I

AB Disclosed are novel compds. (shown as I; e.g. 1-benzyl-5-(2-diethylaminoethoxy)-2-methyl-1H-indole-3-carboxylic acid) or a physiol. acceptable salt, amide, ester or prodrug thereof. The compds. can be used to modulate (antagonize, agonize) chemokine receptor function. Also disclosed is a method for treating a patient having an inflammatory disease and/or viral infection comprising administering an effective amt. of I. In particular embodiments, the invention is a method for treating a patient infected with HIV. The compds. of the present invention were evaluated using a described CCR-5 receptor binding assay. Particularly preferred compds. of the invention can inhibit the binding of sCD-4/GP-120 to CCR-5 by about fifty percent at a concn. of .1 to req. .apprx. 200 .mu.M (IC50 .1 to req. 200 .mu.M). For example the IC50 values for 1-[2-(3-benzoyloxycarbonyl-2-methyl-1H-indol-5-yloxy)ethyl]-3-phenylpyrrolidinium chloride and 1-benzyl-5-(2-diethylaminoethoxy)-2-methyl-1H-indole-3-carboxylic acid benzyl ester were 18.0 and 18.2 .mu.M, resp. 2-Methyl-5-(2-pyrrolidine-1-ylethylamino)-1H-indole-3-carboxylic acid benzyl ester caused 50% inhibition at 17.5 .mu.M. 2-Methyl-5-(2-pyrrolidin-1-ylethyl)-1H-indole-3-carboxylic acid benzyl ester hydrochloride and 5-(2-dimethylaminoethoxy)-2-methyl-1H-indole-3-carboxylic acid (S)-1-phenylethyl ester had IC50s of .apprx. 4.8 .mu.M. 2-Methyl-5-[2-[methyl(tetrahydropyran-4-yl)amino]ethyl]-1H-indole-3-carboxylic acid benzyl ester had an IC50 of 13.9 .+- 1.6 .mu.M. 2-Methyl-5-(pyrrolidin-1-ylethoxy)-1H-indole-3-carboxylic acid benzyl ester, 2-methyl-5-(1-methyl-2-pyrrolidin-1-ylpropoxy)-1H-indole-3-carboxylic acid benzyl ester and 5-(2-diethylaminoethyl)-2-methyl-1H-indole-3-carboxylic acid benzyl ester hydrochloride had IC50s of 20.3 .+- 2.8 .mu.M, 5.52 .+- 1.1 .mu.M and 1.93 .+- 0.32 .mu.M, resp. Preferred compds. can inhibit the binding of sCD-4/GP-120 to CCR-5 with IC50s of .apprx. 10 .mu.M to .apprx. 100 .mu.M or .apprx. 1 nM to .apprx. 10 .mu.M. Although the methods of prepn. are not claimed, >200 example preps. are included. In I, G is CR1 or N; J is CR2 or N; H is CR3 or N; M is C-Y, CH-Y, N-Y or N; Q is NR4, SR4, O, SO or SO2. X is H, halogen, C1-C8 alkyl, substituted C1-C8 alkyl, C2-C8 alkenyl, substituted C2-C8 alkenyl, C2-C8 alkynyl, substituted C2-C8 alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, alkylaryl, heteroarylalkyl, alkylheteroaryl, O, NR5, S, SR5 or NR5R6. Y is CO2R17, C(O)NR17R18, R19, C(O)R17, 3-R17-1,2,4-oxadiazol-5-yl, 5-R17-1,3,4-oxadiazol-2-yl. P is -A-L-N-contg. heteroaryl, -A-L-substituted N-contg. heteroaryl, -A-L-NR7R8, -(CR10R11)c-cyclo-CR9(CH2)a(CH2)bNR7, wherein a, b and c are independently, 0-4 with provisos; A is O, N(R12), a bond or is absent. L is C1-C8 alkyl, substituted C1-C8 alkyl, C2-C8 alkenyl, substituted C2-C8 alkenyl, C2-C8 alkynyl, substituted C2-C8 alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, alkylaryl, heteroarylalkyl, alkylheteroaryl, a bond, or -C(R13)(R14)C(R15)(R16)- wherein A is attached on the right and N is attached on the left. R1, R2, R3, R11, R13, R14, R15, R16 and R19 are independently, H, C1-C8 alkyl, substituted C1-C8 alkyl, C2-C8 alkenyl, substituted C2-C8 alkenyl, C2-C8 alkynyl, substituted C2-C8 alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, alkylaryl, heteroarylalkyl, alkylheteroaryl, halogen, C1-C8 alkoxy, C(O)R22, CO2R22, C(O)NR22R23, NR22R23, CZR22R23. Z is aryl, substituted aryl, heteroaryl or substituted heteroaryl; R22 and R23 are independently, H, C1-C8 alkyl, substituted C1-C8 alkyl, C2-C8 alkenyl, substituted C2-C8 alkenyl, C2-C8 alkynyl, substituted C2-C8 alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, alkylaryl, heteroarylalkyl, alkylheteroaryl; or R22 and R23 taken together with the atoms to which they are bonded can form a 3-8 membered cyclic ring which can contain 0-3 heteroatoms selected from O, N and S. R4-R9, R12, R17 and R18 are independently, H, C1-C8 alkyl, substituted C1-C8 alkyl, C2-C8 alkenyl, substituted C2-C8 alkenyl, C2-C8 alkynyl, substituted C2-C8 alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, alkylaryl, heteroarylalkyl,

alkylheteroaryl, C(O)R20, CO2R20, CZ'R20R21; R20 and R21 are independently H, C1-C8 alkyl, substituted C1-C8 alkyl, C2-C8 alkenyl, substituted C2-C8 alkenyl, C2-C8 alkynyl, substituted C2-C8 alkynyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, arylalkyl, alkylaryl, heteroarylalkyl or alkylheteroaryl; or R20 and R21 taken together with the atoms to which they are bonded can form a 3-8 membered cyclic ring which can contain 0-3 heteroatoms selected from O, N and S; Z' is aryl, substituted aryl, heteroaryl or substituted heteroaryl; or R1 taken together with any one of R7, R8, R9, R10, R11, R12, R13, R14, R15 or R16 and the atoms to which they are bonded form a substituted or unsubstituted 3-8 membered cyclic ring which can contain 0-3 heteroatoms selected from O, N and S. R2 taken together with any one of R3, R7, R8, R9, R10, R11, R12, R13, R14, R15 or R16 and the atoms to which they are bonded form a substituted or unsubstituted 3-8 membered cyclic ring which can contain 0-3 heteroatoms selected from O, N and S. P taken together with either R1 or R2 and the atoms to which they are bonded form a 5-8 membered substituted nonarom. ring that can contain a heteroatom selected from O, N and S. Any two of R7-R17, taken together with the atoms to which they are bonded form a substituted or unsubstituted 3-8 membered cyclic ring which can contain 0-3 heteroatoms selected from O, N and S; with provisos.

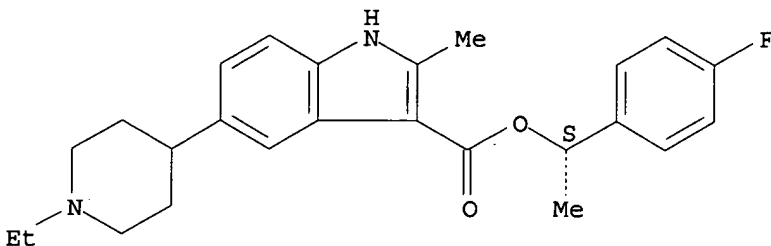
IT 459452-17-6P, 5-(1-Ethylpiperidin-4-yl)-2-methyl-1H-indole-3-carboxylic acid (S)-1-(4-fluorophenyl)ethyl ester 459452-18-7P, 5-(1-Ethylpiperidin-4-yl)-2-methyl-1H-indole-3-carboxylic acid (S)-1-(pyridin-4-yl)ethyl ester 459452-21-2P, 5-(1-Ethyl-4-methylpiperidin-4-yl)-2-methyl-1H-indole-3-carboxylic acid (S)-1-(4-fluorophenyl)ethyl ester 459452-22-3P, 5-(1-Ethyl-4-methylpiperidin-4-yl)-2-methyl-1H-indole-3-carboxylic acid (S)-1-(pyridin-4-yl)ethyl ester  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of functionalized indoles, benzimidazolones and related heterocycles as modulators of CCR-5 chemokine receptor and use in treating patients with HIV)

RN 459452-17-6 CAPLUS

CN 1H-Indole-3-carboxylic acid, 5-(1-ethyl-4-piperidinyl)-2-methyl-, (1S)-1-(4-fluorophenyl)ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

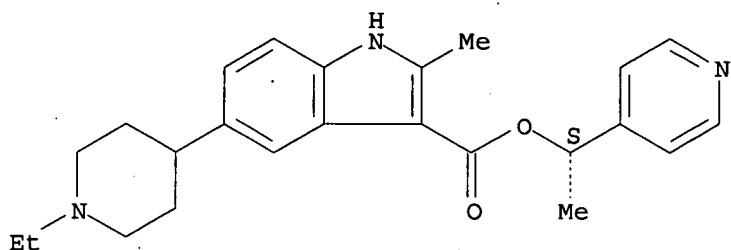


RN 459452-18-7 CAPLUS

CN 1H-Indole-3-carboxylic acid, 5-(1-ethyl-4-piperidinyl)-2-methyl-, (1S)-1-(4-pyridinyl)ethyl ester (9CI) (CA INDEX NAME)

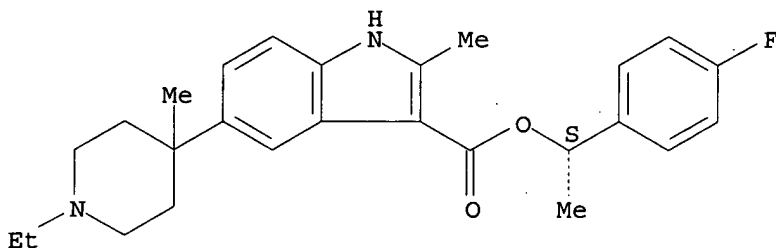
Absolute stereochemistry.





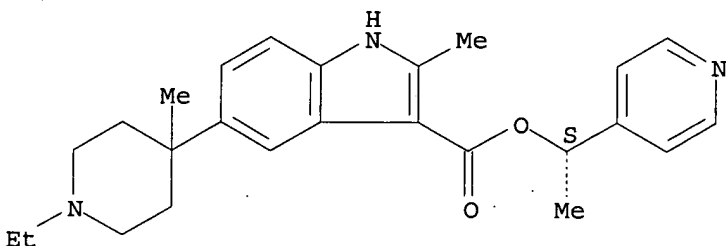
RN 459452-21-2 CAPLUS  
CN 1H-Indole-3-carboxylic acid, 5-(1-ethyl-4-methyl-4-piperidiny)-2-methyl-,  
(1S)-1-(4-fluorophenyl)ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 459452-22-3 CAPLUS  
CN 1H-Indole-3-carboxylic acid, 5-(1-ethyl-4-methyl-4-piperidiny)-2-methyl-,  
(1S)-1-(4-pyridinyl)ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:240778 CAPLUS

DOCUMENT NUMBER: 136:279356

TITLE: Preparation of substituted azepino[4,5-b]indoles as  
5-HT ligands

INVENTOR(S): Frank, Kristine E.; Fu, Jian-Min; Acker, Brad A.;  
Ennis, Michael D.; Fisher, Jed F.; Jacobsen, Eric Jon;  
McWhorter, William W.; Morris, Jeanette K.; Rogier,  
Donald Joseph, Jr.

PATENT ASSIGNEE(S): Pharmacia & Upjohn Company, USA

SOURCE: PCT Int. Appl., 302 pp.

CODEN: PIXXD2

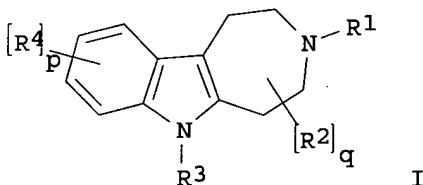
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2002024701   | A2   | 20020328 | WO 2001-US29535 | 20010920   |
| WO 2002024701   | A3   | 20020613 |                 |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |            |
| AU 2001092898   | A5   | 20020402 | AU 2001-92898   | 20010920   |
| US 2002077318   | A1   | 20020620 | US 2001-957319  | 20010920   |
| US 2002107278   | A1   | 20020808 | US 2001-957625  | 20010920   |
| PRIORITY APPLN. INFO.:  |      |          | US 2000-234376P | P 20000920 |
|   |      |          | US 2001-266047P | P 20010201 |
|   |      |          | US 2001-301964P | P 20010629 |
|   |      |          | WO 2001-US29535 | W 20010920 |

OTHER SOURCE(S): MARPAT 136:279356  
GI



AB The title compds. [I; R1 = H, alkyl, etc.; R2 = alkyl, OH; R3 = H, alkyl, aryl, etc.; R4 = alkyl, alkoxy, halo, etc.; p = 0-4; q = 0-8] and their pharmaceutical salts which are 5-HT ligands and are useful for treating diseases, disorders, and/or conditions in a mammal wherein activity of a 5-HT receptor is implicated such as anxiety, depression, schizophrenia, epilepsy, migraine, Alzheimer's disease, sleep disorders, obesity, a stress related disease, or withdrawal from drug abuse, were prepd. Thus, reacting 3-benzoyl-7-bromo-1,2,3,4,5,6-hexahydroazepino[4,5-b]indole with phenylboronic acid (86%) followed by redn. of the resulting 3-benzoyl-7-phenyl-1,2,3,4,5,6-hexahydroazepino[4,5-b]indole with LiAlH4 (92%) afforded I [R1 = CH2Ph; R2, R3 = H; R4 = 7-Ph].

IT 405306-70-9P 405311-78-6P

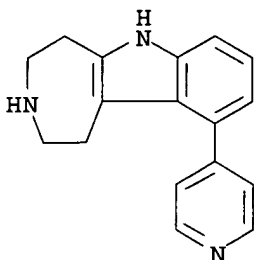
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of substituted azepino[4,5-b]indoles as 5-HT ligands)

RN 405306-70-9 CAPLUS

CN Azepino[4,5-b]indole, 1,2,3,4,5,6-hexahydro-10-(4-pyridinyl)- (9CI) (CA INDEX NAME)

10/ 053,168



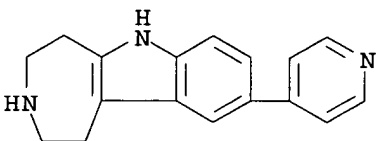
RN 405311-78-6 CAPLUS

CN Formic acid, compd. with 1,2,3,4,5,6-hexahydro-9-(4-pyridinyl)azepino[4,5-b]indole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 405311-77-5

CMF C17 H17 N3



CM 2

CRN 64-18-6

CMF C H2 O2

O=CH-OH

L3 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:240777 CAPLUS

DOCUMENT NUMBER: 136:279440

TITLE: Preparation of azepino[4,5-b]indolines as 5-HT receptor ligands for treatment of central nervous system disorders

INVENTOR(S): Frank, Kristine E.; Fu, Jian-Min; Acker, Brad A.; Ennis, Michael D.; Fisher, Jed F.; Jacobsen, Eric Jon; McWhorter, William W.; Morris, Jeanette K.; Rogier, Donald Joseph, Jr.

PATENT ASSIGNEE(S): Pharmacia & Upjohn Company, USA

SOURCE: PCT Int. Appl., 359 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2002024700 | A2   | 20020328 | WO 2001-US29447 | 20010920 |
| WO 2002024700 | A3   | 20020613 |                 |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

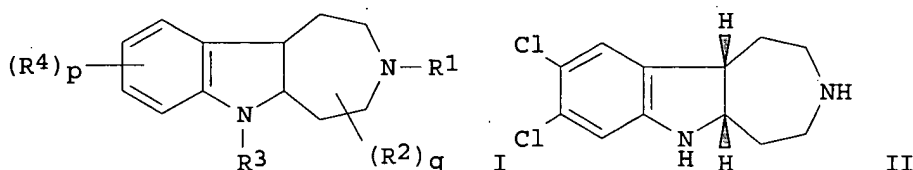
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
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 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,  
 PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,  
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 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2001094606 A5 20020402 AU 2001-94606 20010920  
 US 2002077318 A1 20020620 US 2001-957319 20010920  
 US 2002107278 A1 20020808 US 2001-957625 20010920

PRIORITY APPLN. INFO.:

US 2000-234376P P 20000920  
 US 2001-266047P P 20010201  
 US 2001-301964P P 20010629  
 WO 2001-US29447 W 20010920

OTHER SOURCE(S): MARPAT 136:279440  
 GI



AB Title compds. I [wherein R1 = H, alkyl, and hydrocarbylene aryl; R2 = independently alkyl or OH; R3 = H, alkyl, (hetero)aryl, R7CO, R7OCO, R5R6NCO, R7CS, R7SCO, R5R6NCS, R7SO2, R5R6NSO2, R7SO, R5R6NSO, or substituted hydrocarbylene(CO); R4 = independently aryl(oxy), alkyl, heteroaryl, halo, OH, CN, NO2, CF3, CF3O, (un)substituted amino, etc.; R5 and R6 = independently H, (halo)alkyl, (cyclo)alkenyl, alkynyl, (hydrocarbylene)aryl; or NR5R6 = pyrrolidino, piperidino, morpholino, or thiomorpholino; R7 = independently H, (halo)alkyl, (cyclo)alkenyl, or (hydrocarbylene)aryl; p = 0-4; q = 0-10; or pharmaceutical salts thereof] and their azepino[4,5-b]indole precursors were prepd. For example, 3-benzoyl-8,9-dichloro-1,2,3,4,5,6-hexahydroazepino[4,5-b]indole was deprotected with KOH in ethylene glycol (73%) and the azepinoindole hydrogenated with Na(CN)BH3 in TFA (36%) to give the cis-azepinoindoline II. I are serotonin receptor 5-HT ligands that are useful for treating diseases of the central nervous system, such as anxiety, depression, and obesity (no data).

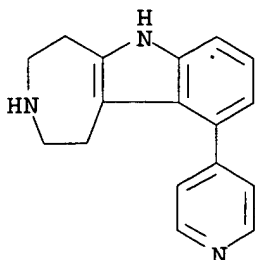
IT 405306-70-9P, 10-(4-Pyridinyl)-1,2,3,4,5,6-hexahydroazepino[4,5-b]indole 405311-78-6P, 9-Pyridin-4-yl-1,2,3,4,5,6-hexahydroazepino[4,5-b]indole formate  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of azepino[4,5-b]indolines as 5-HT receptor ligands for treatment of central nervous system disorders)

RN 405306-70-9 CAPLUS

CN Azepino[4,5-b]indole, 1,2,3,4,5,6-hexahydro-10-(4-pyridinyl)- (9CI) (CA INDEX NAME)

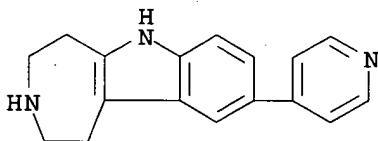
10/ 053,168



RN 405311-78-6 CAPLUS  
CN Formic acid, compd. with 1,2,3,4,5,6-hexahydro-9-(4-pyridinyl)azepino[4,5-b]indole (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 405311-77-5  
CMF C17 H17 N3



CM 2

CRN 64-18-6  
CMF C H2 O2

O=CH-OH

L3 ANSWER 8 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:72088 CAPLUS

DOCUMENT NUMBER: 136:134670

TITLE: Preparation of substituted 1-(4-aminophenyl)indoles and their use as anti-inflammatory agents, and in treatment of autoimmune diseases

INVENTOR(S): Sharma, Rajiv

PATENT ASSIGNEE(S): Boehringer Ingelheim Pharmaceuticals, Inc., USA

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 2002006273  | A1   | 20020124 | WO 2001-US21670 | 20010709 |
| W: CA, JP, MX  |      |          |                 |          |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR |      |          |                 |          |
| US 6353007   | B1   | 20020305 | US 2000-616014  | 20000713 |
| EP 1303508   | A1   | 20030423 | EP 2001-952572  | 20010709 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI, CY, TR

PRIORITY APPLN. INFO.:

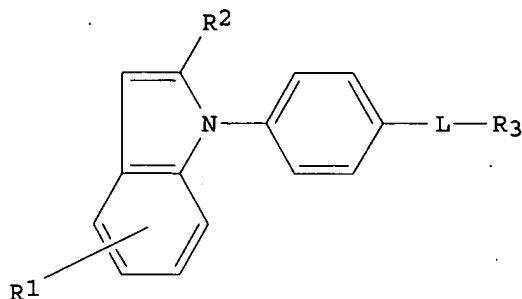
US 2000-616014 A 20000713

WO 2001-US21670 W 20010709

OTHER SOURCE(S):

MARPAT 136:134670

GI



AB The prepn. of 1-(4-Aminophenyl)indoles [I; wherein R1, R2 = same or different, H, CF3, halo, CN, (un)branched C1-8 alkyl; (un)branched C1-8 alkenyl, C3-8 cycloalkyl optionally substituted with OH, CN, OMe, C1-8 alkoxy, C1-4 alkyloxyalkyl, C1-8 alkylthio, C1-4 alkylthioalkyl, C1-8 dialkylamino, C1-4 dialkylaminoalkyl, organocarboxy, etc.; L = NHC(O), NHC(O)O, NHC(O)C(O), NHC(S), CNH, NHC(O)NH, NHC(S)NH, NHCH2, organoamino, etc.; R3 = C1-8 alkyl, C1-8 alkyloxy, C1-8 alkylthio, C1-8 alkylamino, C1-4 alkoxyalkyl, C1-4 alkylthioalkyl, C1-4 alkylaminoalkyl, C1-4 dialkylalkylaminoalkyl, carbocyclyl or heterocyclyl, which carbocyclyl or heterocyclyl is optionally substituted with one or more of the following: halo, CN, NO2, SO2NH2, etc., organocarboxy, organoamino], or a pharmaceutically acceptable deriv. thereof., is described. Thus, N-[4-(2-methylindol-1-yl)phenyl]pyridine-3-carboxamide was prepd. by a multistep synthesis, and had an IC50 value below 10.mu.M. The prepd. indoles inhibit IL-2 prodn. in T-lymphocytes, and thus are useful as anti-inflammatory agents, and in the treatment of autoimmune diseases.

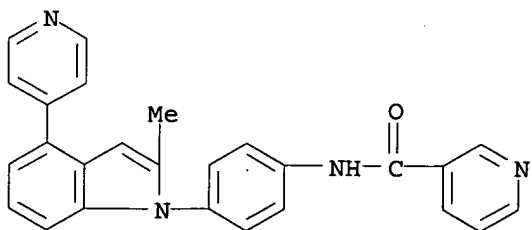
IT 391914-05-9P 391914-06-0P 391914-09-3P  
391914-10-6P 391914-13-9P 391914-14-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of substituted 1-(4-aminophenyl)indoles and use as anti-inflammatory agents, and in treatment of autoimmune diseases)

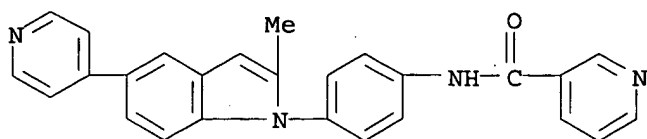
RN 391914-05-9 CAPLUS

CN 3-Pyridinecarboxamide, N-[4-[2-methyl-4-(4-pyridinyl)-1H-indol-1-yl]phenyl]- (9CI) (CA INDEX NAME)

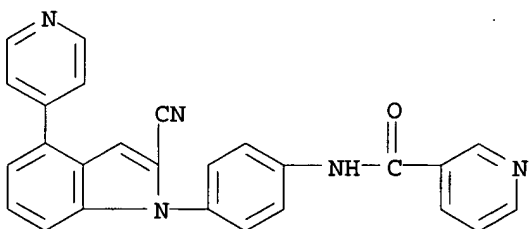


RN 391914-06-0 CAPLUS

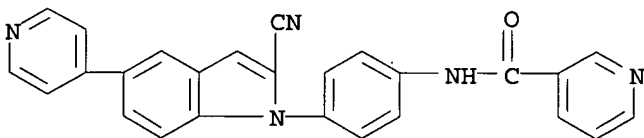
CN 3-Pyridinecarboxamide, N-[4-[2-methyl-5-(4-pyridinyl)-1H-indol-1-yl]phenyl]- (9CI) (CA INDEX NAME)



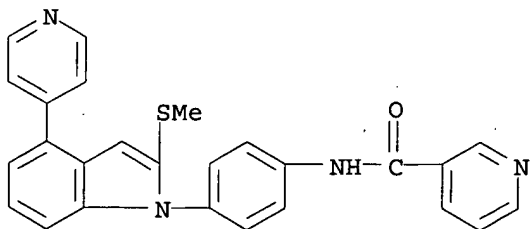
RN 391914-09-3 CAPLUS  
CN 3-Pyridinecarboxamide, N-[4-[2-methyl-4-(4-pyridinyl)-1H-indol-1-yl]phenyl]-  
(9CI) (CA INDEX NAME)



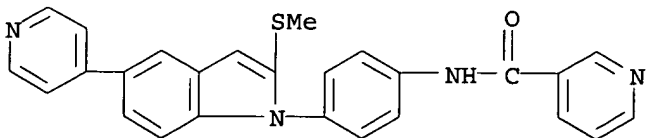
RN 391914-10-6 CAPLUS  
CN 3-Pyridinecarboxamide, N-[4-[2-cyano-5-(4-pyridinyl)-1H-indol-1-yl]phenyl]-  
(9CI) (CA INDEX NAME)



RN 391914-13-9 CAPLUS  
CN 3-Pyridinecarboxamide, N-[4-[2-(methylthio)-4-(4-pyridinyl)-1H-indol-1-yl]phenyl]- (9CI) (CA INDEX NAME)



RN 391914-14-0 CAPLUS  
CN 3-Pyridinecarboxamide, N-[4-[2-(methylthio)-5-(4-pyridinyl)-1H-indol-1-yl]phenyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:72052 CAPLUS

DOCUMENT NUMBER: 136:118474

TITLE: Preparation of dicyanopyridine derivatives as high-conductance calcium-sensitive potassium channel openers

INVENTOR(S): Harada, Hironori; Watanuki, Susumu; Takuwa, Tomofumi; Kawaguchi, Kenichi; Okazaki, Toshio; Hirano, Yuusuke; Saitoh, Chikashi

PATENT ASSIGNEE(S): Yamanouchi Pharmaceutical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 92 pp.

CODEN: PIXXD2

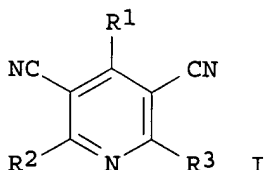
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO.   | DATE       |
|--|------|----------|-------------------|------------|
| WO 2002006237  | A1   | 20020124 | WO 2001-JP6136    | 20010716   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG<br>AU 2001069529 A5 20020130 AU 2001-69529 20010716<br>EP 1302463 A1 20030416 EP 2001-948028 20010716<br>R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR |      |          |                   |            |
| PRIORITY APPLN. INFO.:   |      |          | JP 2000-216982    | A 20000718 |
|  |      |          | WO 2001-JP6136    | W 20010716 |
| OTHER SOURCE(S):   |      |          | MARPAT 136:118474 |            |
| GI   |      |          |                   |            |



AB Claimed are therapeutic agents for opening high-conductance calcium-sensitive potassium channel contg. the title compds. [I; R1 = H, (un)substituted lower alkyl, cycloalkyl, aryl, heteroaryl, or 5 to 6-membered satd. heterocyclyl; R2, R3 = OR4, S(O)nR4, NR4R5, NHCOR5, NHS(O)nR5, NHCONR4R5, N(COR5)2, halo, (un)substituted heteroaryl; wherein R4 = H, (un)substituted lower alkyl, lower alkenyl, alkynyl, aryl, heteroaryl, or 5 to 6-membered satd. heterocyclyl; R5 = H, (un)substituted lower alkyl, cycloalkyl, lower alkoxy-lower alkyl, aryloxy-lower alkyl, aryl-lower alkyl, (un)substituted aryl or heteroaryl; or R4 and R5 are taken together with the adjacent N atom to form a 5 to 6-membered satd. heterocyclyl or heteroaryl; n = 0, 1, 2] or salts thereof as the active ingredients. The compds. I exhibit excellent activity of opening the



maxi-K channel, also called as BK channel, and bladder smooth muscle contracting activity based on the maxi-K opening activity, and thus can be used in the treatment of frequent urination and urinary incontinence. Thus, 0.70 g Na was dissolved in 20 mL MeOH at room temp. with stirring, followed by adding 0.85 g malononitrile and 2.0g 2-(thiophen-3-ylmethylidene)malononitrile, and the resulting mixt. was refluxed with stirring for 3 h to give 2-amino-6-methoxy-4-(2-thienyl)pyridine-3,5-dicarbonitrile (II). II and 2-amino-6-(2-pyridylmethoxy)-4-(2-fluorophenyl)pyridine-3,5-dicarbonitrile showed IC<sub>50</sub> of 0.15 and 0.042 .mu.M, resp., for inhibiting the K<sup>+</sup> ion-induced contraction of rat bladder.

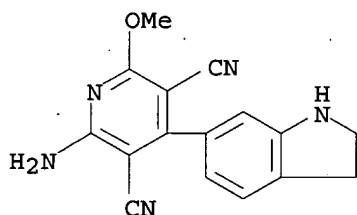
IT 391664-31-6P 391665-82-0P 391668-84-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of dicyanopyridine derivs. as high-conductance calcium-sensitive potassium channel openers for treatment of frequent urination and urinary incontinence)

RN 391664-31-6 CAPLUS

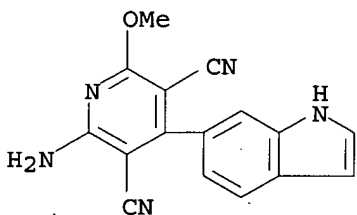
CN 3,5-Pyridinedicarbonitrile, 2-amino-4-(2,3-dihydro-1H-indol-6-yl)-6-methoxy-, monohydrochloride (9CI) (CA INDEX NAME)



⊙ HCl

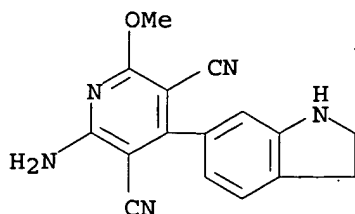
RN 391665-82-0 CAPLUS

CN 3,5-Pyridinedicarbonitrile, 2-amino-4-(1H-indol-6-yl)-6-methoxy- (9CI) (CA INDEX NAME)



RN 391668-84-1 CAPLUS

CN 3,5-Pyridinedicarbonitrile, 2-amino-4-(2,3-dihydro-1H-indol-6-yl)-6-methoxy- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:31440 CAPLUS

DOCUMENT NUMBER: 136:102386

TITLE: Preparation and use of 4-heteroaryl-3-heteroarylidenylnyl-2-indolinones and their use as protein kinase inhibitors

INVENTOR(S): Tang, Peng Cho; Wei, Chung Chen; Huang, Ping; Cui, Jingron

PATENT ASSIGNEE(S): Sugan, Inc., USA

SOURCE: PCT Int. Appl., 164 pp.

CODEN: PIXXD2

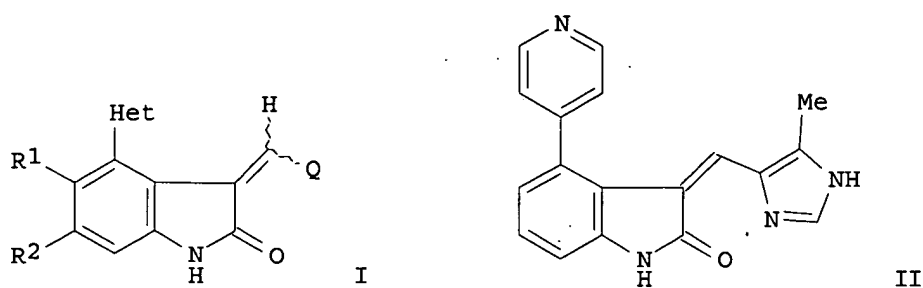
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.   | DATE       |
|---|------|----------|-------------------|------------|
| WO 2002002551   | A1   | 20020110 | WO 2001-US20768   | 20010629   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG |      |          |                   |            |
| US 2002187978   | A1   | 20021212 | US 2001-894902    | 20010629   |
| EP 1296975  | A1   | 20030402 | EP 2001-948830    | 20010629   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                   |            |
| PRIORITY APPLN. INFO.:  |      |          | US 2000-215654P   | P 20000630 |
|   |      |          | WO 2001-US20768   | W 20010629 |
| OTHER SOURCE(S):  |      |          | MARPAT 136:102386 |            |
| GI  |      |          |                   |            |



AB Title compds. I [R1-2 = H, alkyl, cycloalkyl, aryl, heteroaryl, heteroalicyclic, halo, etc.; Het = (un)substituted arom. heterocycle contg. at least one and not more than two N atoms, tetrahydro(thio)pyranyl, (thio)morpholino, piperidinyl, piperazinyl, tetrazolyl, etc.; Q = (un)substituted arom. heterocycle contg. not more than two N atoms, 5-membered ring (un)substituted heterocycle contg. N, O or S, e.g., imidazolyl, pyrrolyl, indolyl, etc.] with some exceptions, were prepd. Included are 75 synthetic examples and results for several protein tyrosine kinase assays for those compds. For instance, 4-bromoindole was coupled to bis(pinacolato)diborane (DMSO, KOAc, PdCl<sub>2</sub>(dppf).bul.CH<sub>2</sub>Cl<sub>2</sub>, 80.degree.C, 22 h). The resulting dioxaborolane was coupled to 4-bromopyridine.bul.HCl (THF, Pd(PPh<sub>3</sub>)<sub>4</sub>, NaOH, 70.degree.C, 6 h) to give the indole which was treated with C<sub>5</sub>H<sub>5</sub>N.bul.Br<sub>3</sub> (t-BuOH/EtOH/H<sub>2</sub>O, 1h) followed by zinc (stirred 1 addnl. hour) to give 4-(pyridin-4-yl)-1,3-dihydroindol-2-one as a yellow solid. Condensation of this intermediate with 5-methylimidazole-4-carboxaldehyde (EtOH, piperidine, 2 days) afforded II. II had IC<sub>50</sub> = 4.88 mM for FGFR-1 tyrosine kinase and 0.03 mM for cdk2/cyclin A tyrosine kinase. I are useful in treating cancer, immunol. disorders, etc.

IT 388116-44-7P 388116-45-8P 388116-46-9P  
 388116-47-0P 388116-50-5P 388116-51-6P  
 388116-52-7P 388116-54-9P 388116-55-0P  
 388116-56-1P 388116-57-2P, 3-(1H-Indol-2-ylmethylene)-4-(pyridin-4-yl)-1,3-dihydroindol-2-one 388116-58-3P,  
 4-(Pyridin-4-yl)-3-(4,5,6,7-tetrahydro-1H-indol-2-ylmethylene)-1,3-dihydroindol-2-one 388116-59-4P, 3-[5-(2-(Morpholin-4-yl)ethoxy)-1H-indol-2-ylmethylene]-4-(pyridin-4-yl)-1,3-dihydroindol-2-one  
 388116-60-7P 388116-61-8P 388116-62-9P  
 388116-64-1P 388116-65-2P 388116-66-3P  
 388116-68-5P 388116-70-9P, 3-(5-Methylthiophen-2-ylmethylene)-4-(pyridin-4-yl)-1,3-dihydroindol-2-one 388116-71-0P  
 , 3-(4-Morpholin-4-ylbenzylidene)-4-(pyridin-4-yl)-1,3-dihydroindol-2-one  
 388116-72-1P 388116-73-2P 388116-74-3P  
 388116-76-5P 388116-79-8P 388116-80-1P,  
 3-[3-Methyl-4-((piperidin-1-yl)carbonyl)pyrrol-2-ylmethylene]-4-(piperidin-4-yl)-1,3-dihydroindol-2-one 388116-81-2P, 3-[3-Methyl-4-(morpholine-4-carbonyl)pyrrol-2-ylmethylene]-4-(piperidin-4-yl)-1,3-dihydroindol-2-one 388116-83-4P 388116-84-5P  
 388116-85-6P 388116-86-7P, 3-(3,5-Dimethyl-1H-pyrrol-2-ylmethylene)-4-(piperidin-4-yl)-1,3-dihydroindol-2-one  
 388116-87-8P 388116-88-9P 388116-89-0P  
 388116-90-3P 388116-91-4P 388116-92-5P  
 388116-93-6P, 3-(1H-Indol-2-ylmethylene)-4-(piperidin-4-yl)-1,3-dihydroindol-2-one 388116-94-7P, 4-(Piperidin-4-yl)-3-(4,5,6,7-tetrahydro-1H-indol-2-ylmethylene)-1,3-dihydroindol-2-one  
 388116-95-8P, 3-[5-(2-(Morpholin-4-yl)ethoxy)-1H-indol-2-ylmethylene]-4-(piperidin-4-yl)-1,3-dihydroindol-2-one  
 388116-96-9P 388116-97-0P 388116-98-1P,  
 3-[3-(3-Morpholin-4-ylpropyl)-4,5,6,7-tetrahydro-1H-indol-2-ylmethylene]-4-

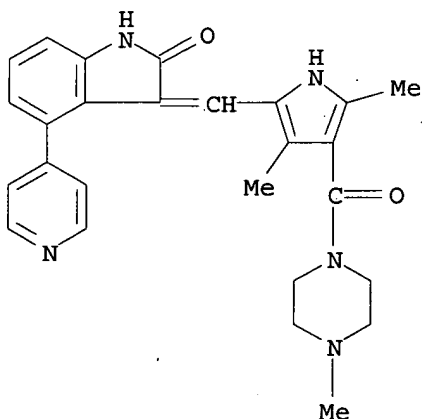
(piperidin-4-yl)-1,3-dihydroindol-2-one 388116-99-2P  
 388117-00-8P, 3-[(3-Methyl-5-(4-methylpiperazin-1-ylcarbonyl)pyrrol-2-yl)methylene]-4-(piperidin-4-yl)-1,3-dihydroindol-2-one 388117-01-9P 388117-02-0P 388117-03-1P,  
 3-(5-Methylthiophen-2-ylmethylene)-4-(piperidin-4-yl)-1,3-dihydroindol-2-one 388117-04-2P, 3-(4-Morpholin-4-ylbenzylidene)-4-(piperidin-4-yl)-1,3-dihydroindol-2-one 388117-05-3P 388117-06-4P  
 388117-07-5P 388117-08-6P 388117-10-0P  
 388117-12-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug; prepn. and use of 4-heteroaryl-3-heteroarylidenyl-2-indolinones and their use as protein kinase inhibitors)

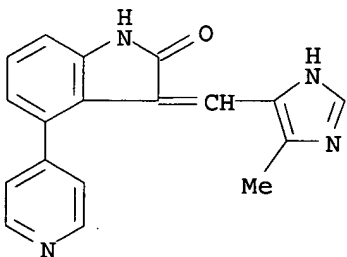
RN 388116-44-7 CAPLUS

CN Piperazine, 1-[[5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-2,4-dimethyl-1H-pyrrol-3-yl]carbonyl]-4-methyl- (9CI) (CA INDEX NAME)



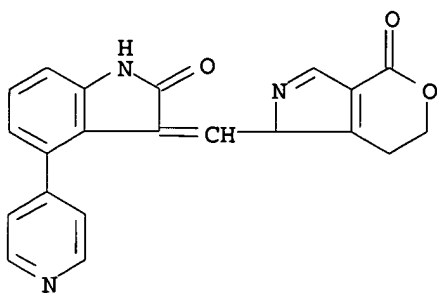
RN 388116-45-8 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-3-[(5-methyl-1H-imidazol-4-yl)methylene]-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)

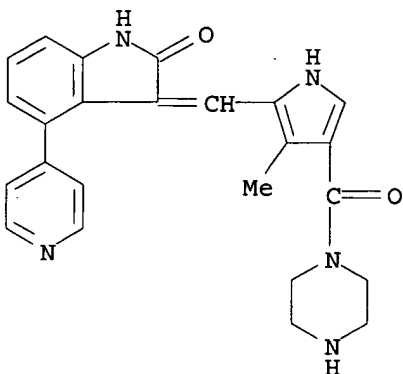


RN 388116-46-9 CAPLUS

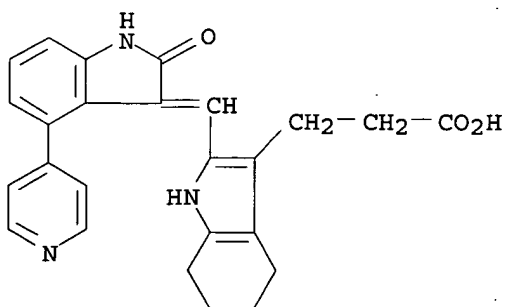
CN Pyrano[3,4-c]pyrrol-4(1H)-one, 1-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-6,7-dihydro- (9CI) (CA INDEX NAME)



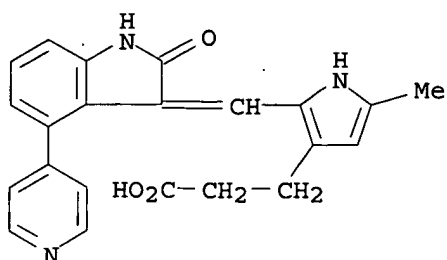
RN 388116-47-0 CAPLUS  
CN Piperazine, 1-[[5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-4-methyl-1H-pyrrol-3-yl]carbonyl]- (9CI) (CA INDEX NAME)



RN 388116-50-5 CAPLUS  
CN 1H-Indole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-4,5,6,7-tetrahydro- (9CI) (CA INDEX NAME)

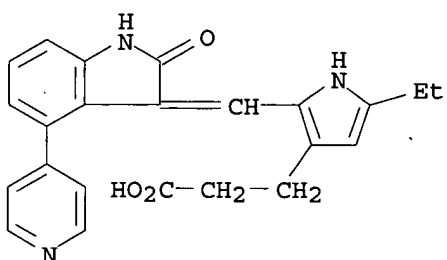


RN 388116-51-6 CAPLUS  
CN 1H-Pyrrole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-5-methyl- (9CI) (CA INDEX NAME)



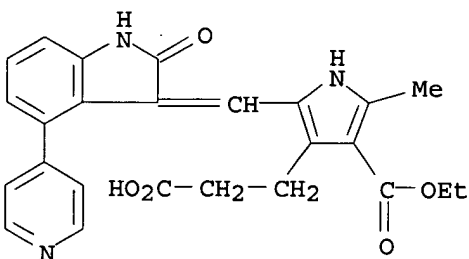
RN 388116-52-7 CAPLUS

CN 1H-Pyrrole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-5-ethyl- (9CI) (CA INDEX NAME)



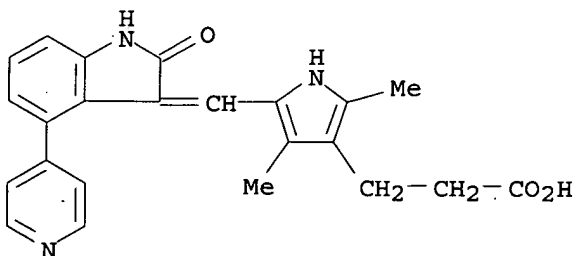
RN 388116-54-9 CAPLUS

CN 1H-Pyrrole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-4-(ethoxycarbonyl)-5-methyl- (9CI) (CA INDEX NAME)



RN 388116-55-0 CAPLUS

CN 1H-Pyrrole-3-propanoic acid, 5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-2,4-dimethyl- (9CI) (CA INDEX NAME)

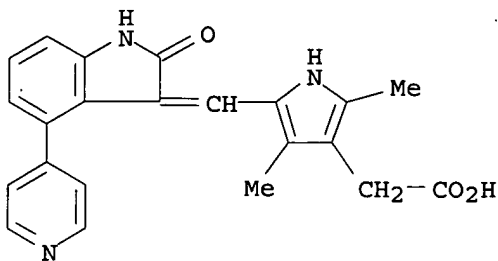


RN 388116-56-1 CAPLUS

CN 1H-Pyrrole-3-acetic acid, 5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-

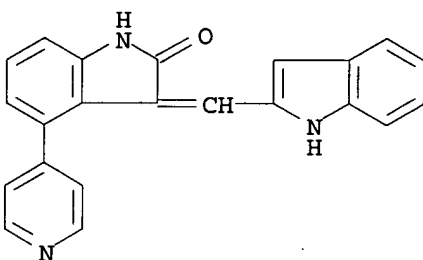
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ylidene)methyl]-2,4-dimethyl- (9CI) (CA INDEX NAME)



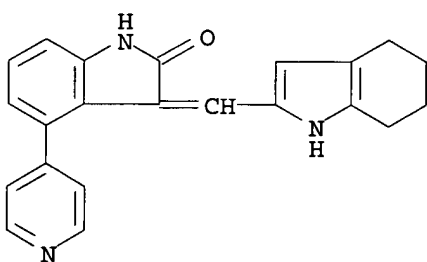
RN 388116-57-2 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-3-(1H-indol-2-ylmethylene)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



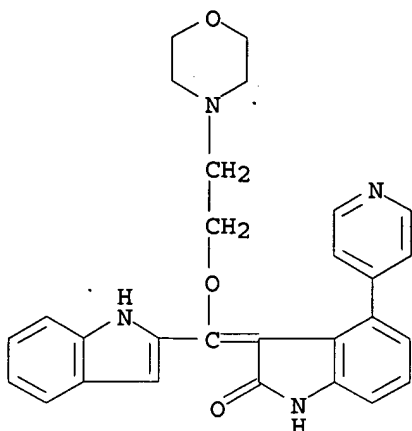
RN 388116-58-3 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-4-(4-pyridinyl)-3-[(4,5,6,7-tetrahydro-1H-indol-2-yl)methylene]- (9CI) (CA INDEX NAME)



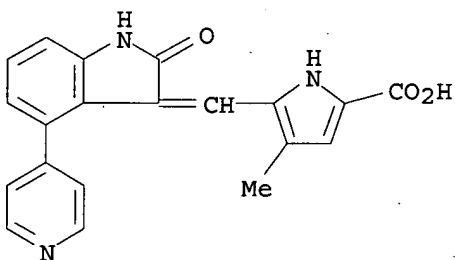
RN 388116-59-4 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-3-[1H-indol-2-yl[2-(4-morpholinyl)ethoxy]methylene]-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



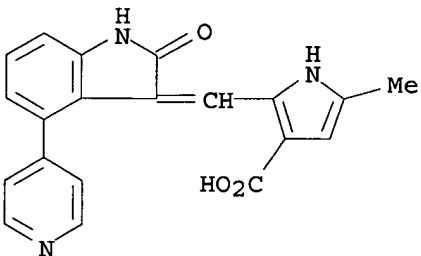
RN 388116-60-7 CAPLUS

CN 1H-Pyrrole-2-carboxylic acid, 5-[[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-4-methyl- (9CI) (CA INDEX NAME)



RN 388116-61-8 CAPLUS

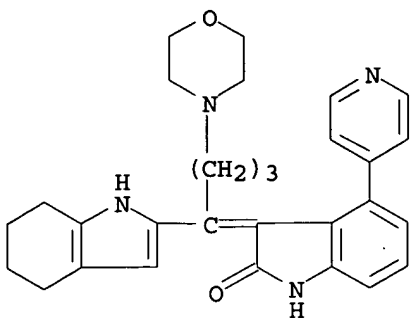
CN 1H-Pyrrole-3-carboxylic acid, 2-[[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-5-methyl- (9CI) (CA INDEX NAME)



RN 388116-62-9 CAPLUS

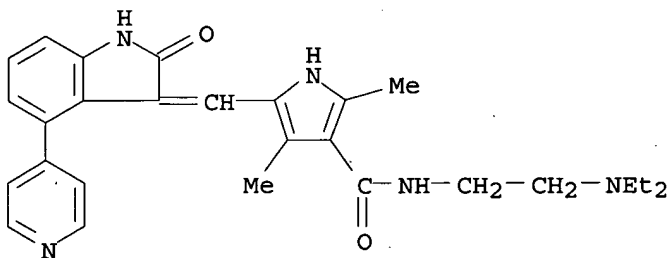
CN 2H-Indol-2-one, 1,3-dihydro-3-[4-(4-morpholinyl)-1-(4,5,6,7-tetrahydro-1H-indol-2-yl)butylidene]-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)





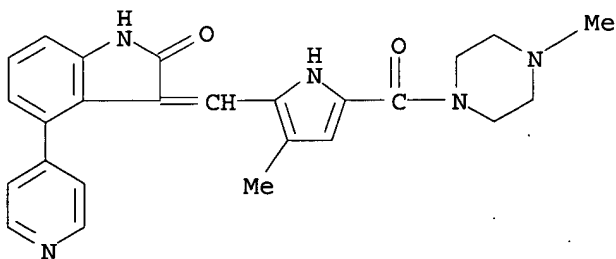
RN 388116-64-1 CAPLUS

CN 1H-Pyrrole-3-carboxamide, N-[2-(diethylamino)ethyl]-5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-2,4-dimethyl- (9CI) (CA INDEX NAME)



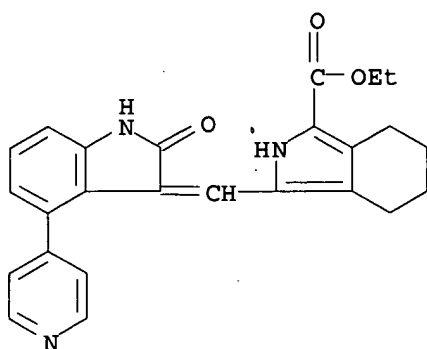
RN 388116-65-2 CAPLUS

CN Piperazine, 1-[[5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-4-methyl-1H-pyrrol-2-yl]carbonyl]-4-methyl- (9CI) (CA INDEX NAME)



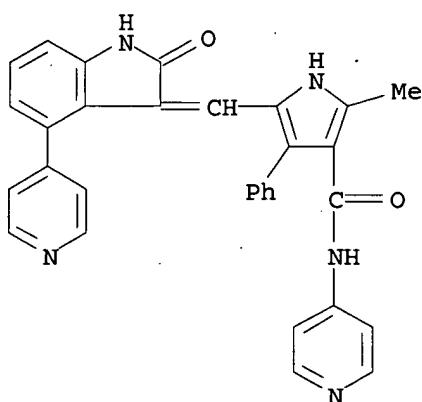
RN 388116-66-3 CAPLUS

CN 2H-Isoindole-1-carboxylic acid, 3-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-4,5,6,7-tetrahydro-, ethyl ester (9CI) (CA INDEX NAME)



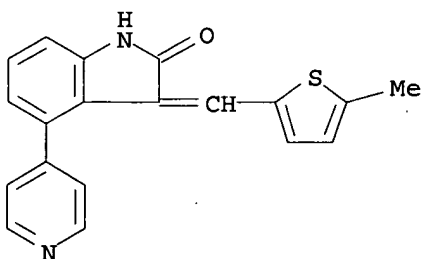
RN 388116-68-5 CAPLUS

CN 1H-Pyrrole-3-carboxamide, 5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-2-methyl-4-phenyl-N-4-pyridinyl- (9CI) (CA INDEX NAME)



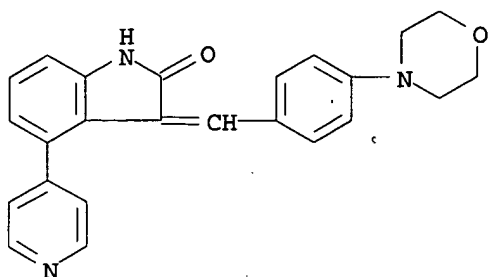
RN 388116-70-9 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-3-[(5-methyl-2-thienyl)methylene]-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)

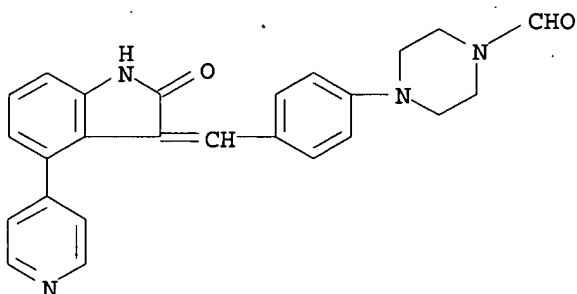


RN 388116-71-0 CAPLUS

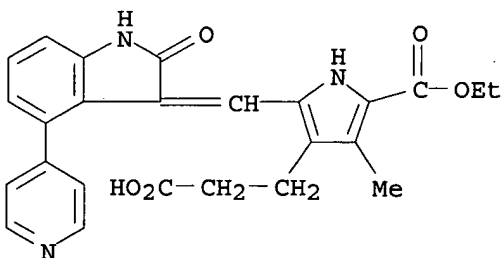
CN 2H-Indol-2-one, 1,3-dihydro-3-[[4-(4-morpholinyl)phenyl]methylene]-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



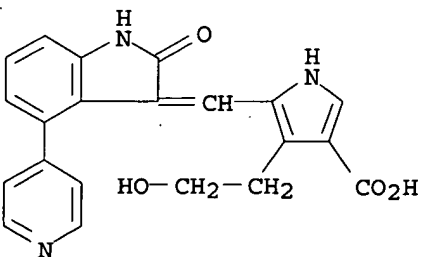
RN 388116-72-1 CAPLUS  
CN 1-Piperazinecarboxaldehyde, 4-[4-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]phenyl]- (9CI) (CA INDEX NAME)



RN 388116-73-2 CAPLUS  
CN 1H-Pyrrole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-5-(ethoxycarbonyl)-4-methyl- (9CI) (CA INDEX NAME)

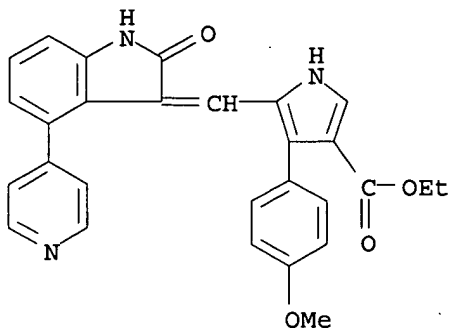


RN 388116-74-3 CAPLUS  
CN 1H-Pyrrole-3-carboxylic acid, 5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-4-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



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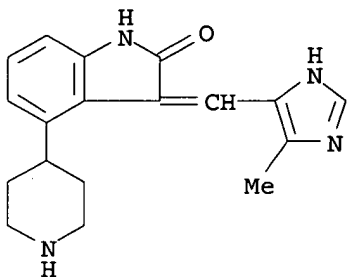
RN 388116-76-5 CAPLUS  
CN 1H-Pyrrole-3-carboxylic acid, 5-[[1,2-dihydro-2-oxo-4-(4-pyridinyl)-3H-indol-3-ylidene]methyl]-4-(4-methoxyphenyl)-, ethyl ester (9CI) (CA INDEX NAME)



RN 388116-79-8 CAPLUS  
CN 2H-Indol-2-one, 1,3-dihydro-3-[(5-methyl-1H-imidazol-4-yl)methylene]-4-(4-piperidinyl)-, monoacetate (9CI) (CA INDEX NAME)

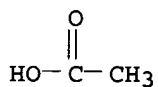
CM 1

CRN 388116-78-7  
CMF C18 H20 N4 O



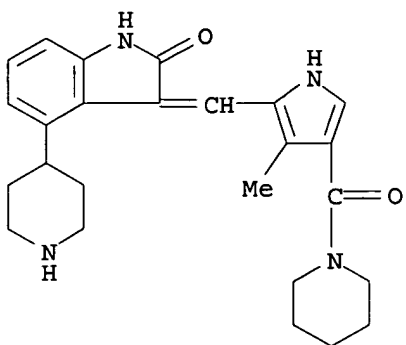
CM 2

CRN 64-19-7  
CMF C2 H4 O2

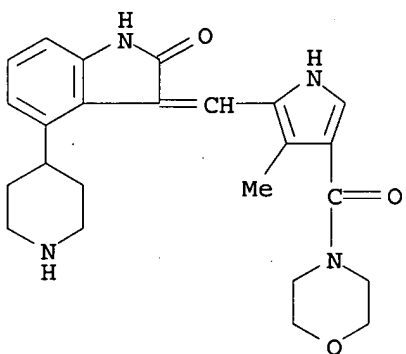


RN 388116-80-1 CAPLUS  
CN Piperidine, 1-[[5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-methyl-1H-pyrrol-3-yl]carbonyl]- (9CI) (CA INDEX NAME)

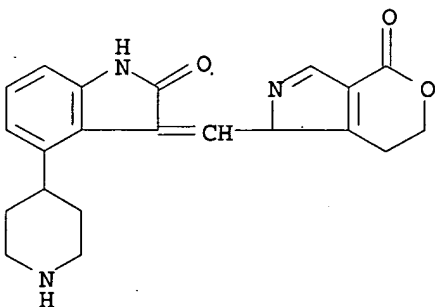
10/ 053,168



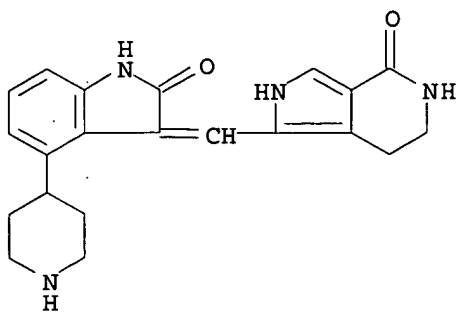
RN 388116-81-2 CAPLUS  
CN Morpholine, 4-[[5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-methyl-1H-pyrrol-3-yl]carbonyl]- (9CI) (CA INDEX NAME)



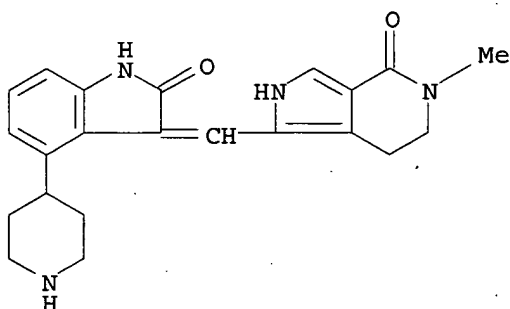
RN 388116-83-4 CAPLUS  
CN Pyrano[3,4-c]pyrrol-4(1H)-one, 1-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-6,7-dihydro- (9CI) (CA INDEX NAME)



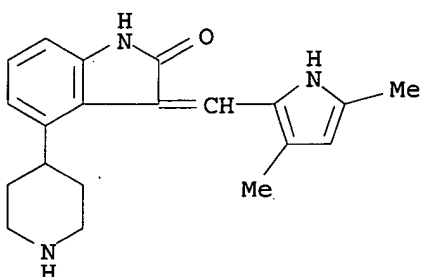
RN 388116-84-5 CAPLUS  
CN 4H-Pyrrolo[3,4-c]pyridin-4-one, 1-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-2,5,6,7-tetrahydro- (9CI) (CA INDEX NAME)



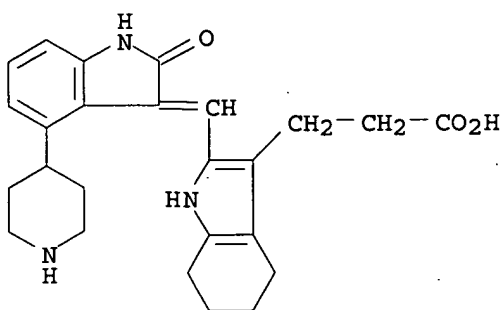
RN 388116-85-6 CAPLUS  
 CN 4H-Pyrrolo[3,4-c]pyridin-4-one, 1-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-2,5,6,7-tetrahydro-5-methyl- (9CI) (CA INDEX NAME)



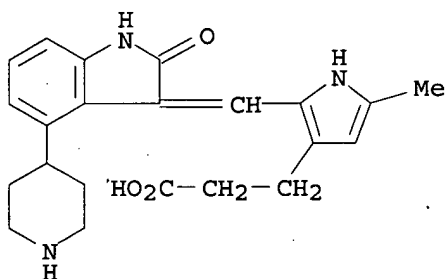
RN 388116-86-7 CAPLUS  
 CN 2H-Indol-2-one, 3-[(3,5-dimethyl-1H-pyrrol-2-yl)methylene]-1,3-dihydro-4-(4-piperidinyl)- (9CI) (CA INDEX NAME)



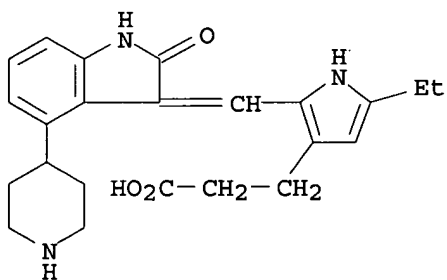
RN 388116-87-8 CAPLUS  
 CN 1H-Indole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4,5,6,7-tetrahydro- (9CI) (CA INDEX NAME)



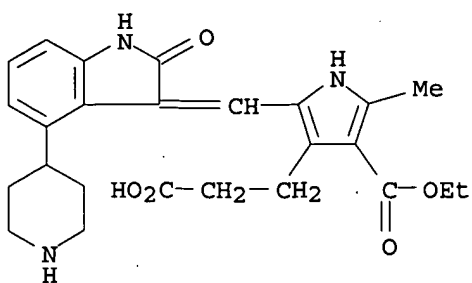
RN 388116-88-9 CAPLUS  
 CN 1H-Pyrrole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-5-methyl- (9CI) (CA INDEX NAME)



RN 388116-89-0 CAPLUS  
 CN 1H-Pyrrole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-5-ethyl- (9CI) (CA INDEX NAME)

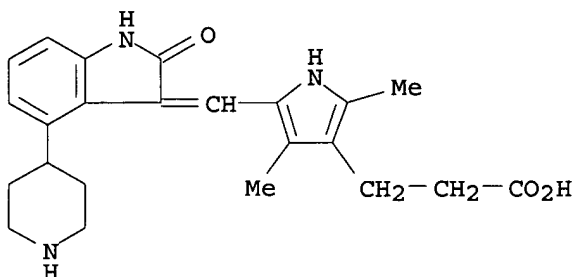


RN 388116-90-3 CAPLUS  
 CN 1H-Pyrrole-3-propanoic acid, 2-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-(ethoxycarbonyl)-5-methyl- (9CI) (CA INDEX NAME)



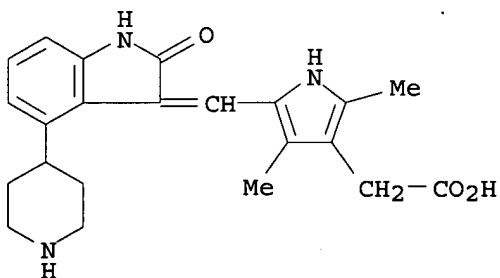
RN 388116-91-4 CAPLUS

CN 1H-Pyrrole-3-propanoic acid, 5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-2,4-dimethyl- (9CI) (CA INDEX NAME)



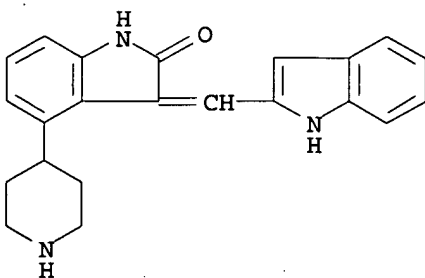
RN 388116-92-5 CAPLUS

CN 1H-Pyrrole-3-acetic acid, 5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-2,4-dimethyl- (9CI) (CA INDEX NAME)



RN 388116-93-6 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-3-(1H-indol-2-ylmethylene)-4-(4-piperidinyl)- (9CI) (CA INDEX NAME)

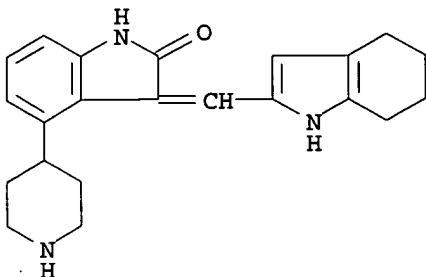




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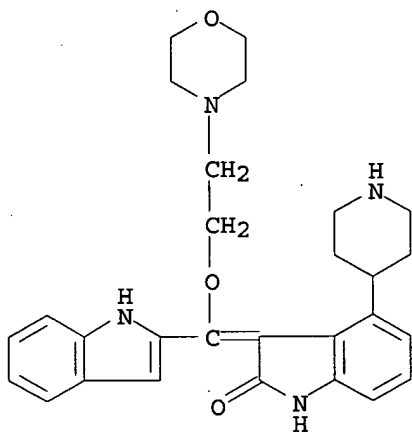
RN 388116-94-7 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-4-(4-piperidinyl)-3-[(4,5,6,7-tetrahydro-1H-indol-2-yl)methylene]- (9CI) (CA INDEX NAME)



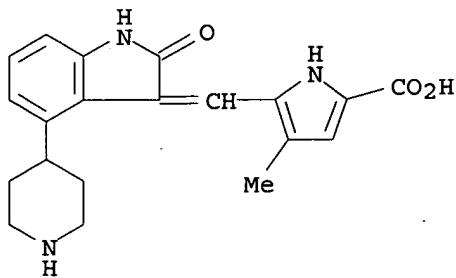
RN 388116-95-8 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-3-[1H-indol-2-yl[2-(4-morpholinyl)ethoxy]methylene]-4-(4-piperidinyl)- (9CI) (CA INDEX NAME)



RN 388116-96-9 CAPLUS

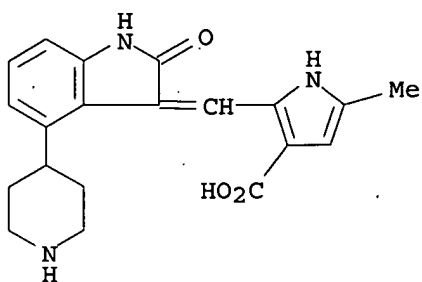
CN 1H-Pyrrole-2-carboxylic acid, 5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-methyl- (9CI) (CA INDEX NAME)



RN 388116-97-0 CAPLUS

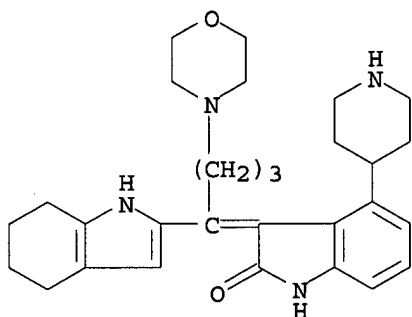
CN 1H-Pyrrole-3-carboxylic acid, 2-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-5-methyl- (9CI) (CA INDEX NAME)

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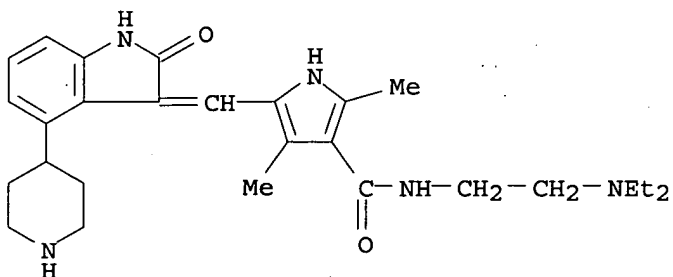
RN 388116-98-1 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-3-[4-(4-morpholinyl)-1-(4,5,6,7-tetrahydro-1H-indol-2-yl)butylidene]-4-(4-piperidinyl)- (9CI) (CA INDEX NAME)



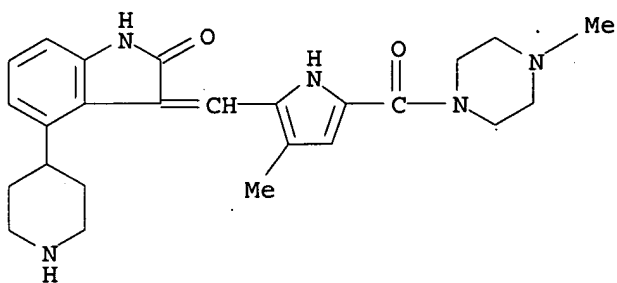
RN 388116-99-2 CAPLUS

CN 1H-Pyrrole-3-carboxamide, N-[2-(diethylamino)ethyl]-5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-2,4-dimethyl- (9CI) (CA INDEX NAME)

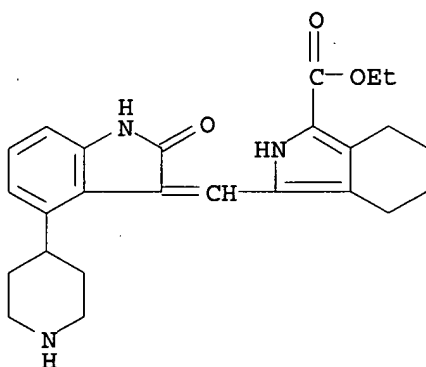


RN 388117-00-8 CAPLUS

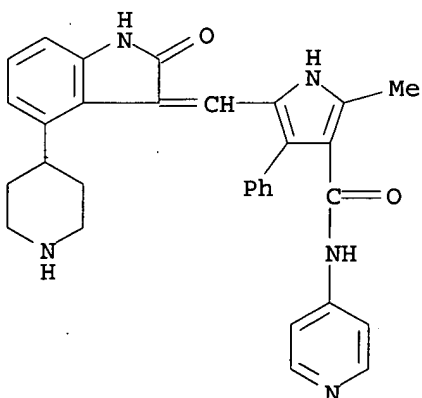
CN Piperazine, 1-[[5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-methyl-1H-pyrrol-2-yl]carbonyl]-4-methyl- (9CI) (CA INDEX NAME)



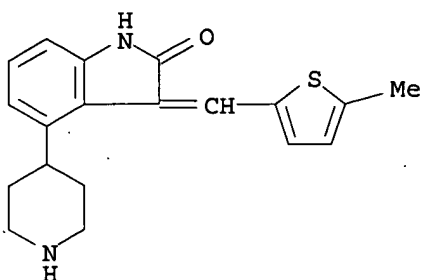
RN 388117-01-9 CAPLUS  
 CN 2H-Isoindole-1-carboxylic acid, 3-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4,5,6,7-tetrahydro-, ethyl ester (9CI) (CA INDEX NAME)



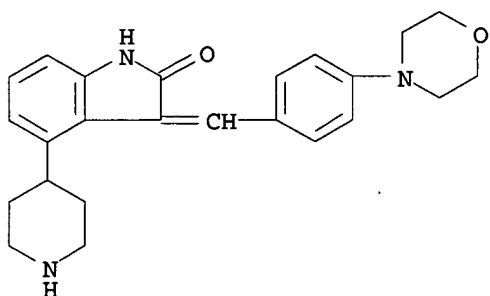
RN 388117-02-0 CAPLUS  
 CN 1H-Pyrrole-3-carboxamide, 5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-2-methyl-4-phenyl-N-4-pyridinyl- (9CI) (CA INDEX NAME)



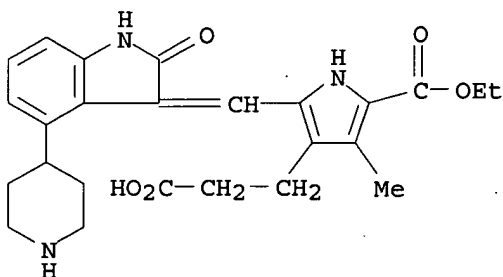
RN 388117-03-1 CAPLUS  
 CN 2H-Indol-2-one, 1,3-dihydro-3-[(5-methyl-2-thienyl)methylene]-4-(4-piperidinyl)- (9CI) (CA INDEX NAME)



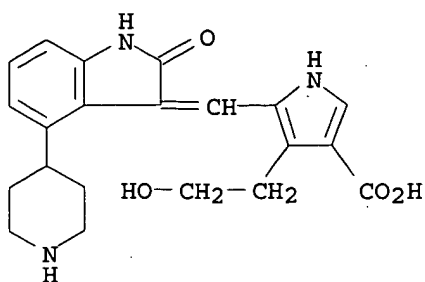
RN 388117-04-2 CAPLUS  
 CN 2H-Indol-2-one, 1,3-dihydro-3-[[4-(4-morpholinyl)phenyl]methylene]-4-(4-piperidinyl)- (9CI) (CA INDEX NAME)



RN 388117-05-3 CAPLUS  
 CN 1H-Pyrrole-3-propanoic acid, 2-[[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-5-(ethoxycarbonyl)-4-methyl- (9CI) (CA INDEX NAME)

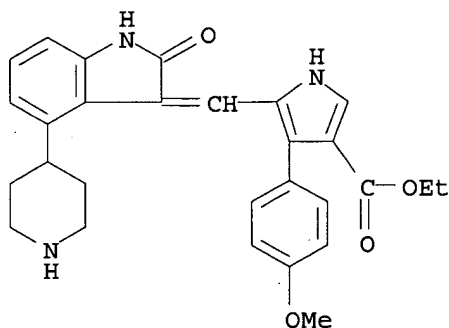


RN 388117-06-4 CAPLUS  
 CN 1H-Pyrrole-3-carboxylic acid, 5-[[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



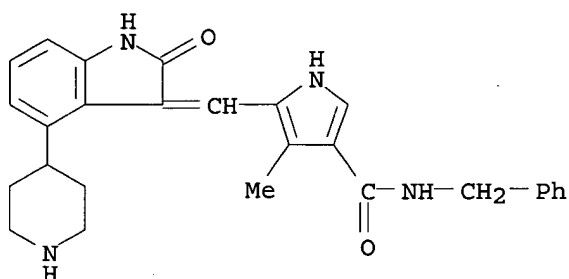
RN 388117-07-5 CAPLUS

CN 1H-Pyrrole-3-carboxylic acid, 5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-(4-methoxyphenyl)-, ethyl ester (9CI) (CA INDEX NAME)



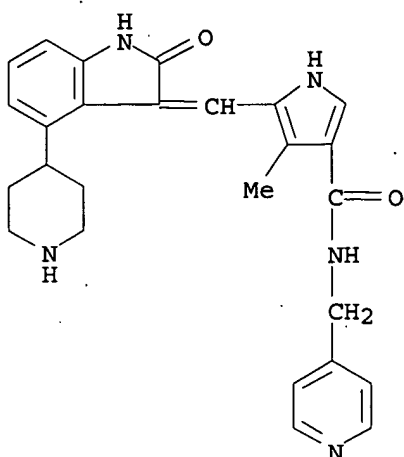
RN 388117-08-6 CAPLUS

CN 1H-Pyrrole-3-carboxamide, 5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-methyl-N-(phenylmethyl)- (9CI) (CA INDEX NAME)

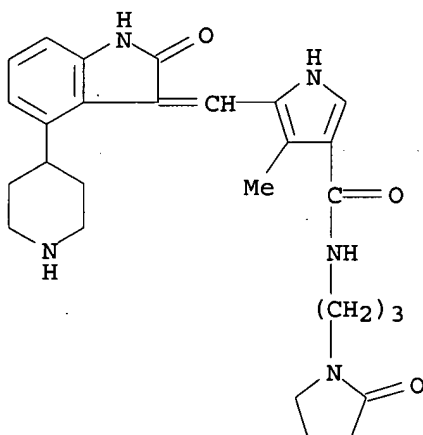


RN 388117-10-0 CAPLUS

CN 1H-Pyrrole-3-carboxamide, 5-[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-methyl-N-(4-pyridinylmethyl)- (9CI) (CA INDEX NAME)

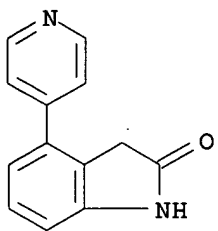


RN 388117-12-2 CAPLUS  
 CN 1H-Pyrrole-3-carboxamide, 5-[[[1,2-dihydro-2-oxo-4-(4-piperidinyl)-3H-indol-3-ylidene]methyl]-4-methyl-N-[3-(2-oxo-1-pyrrolidinyl)propyl]- (9CI) (CA INDEX NAME)

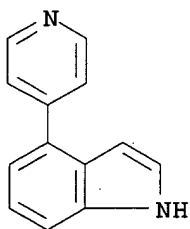


IT 388116-26-5P, 4-(Pyridin-4-yl)-1,3-dihydroindol-2-one  
 388116-28-7P, 4-(Pyridin-4-yl)-1H-indole 388116-29-8P,  
 4-(Piperidin-4-yl)-1,3-dihydroindol-2-one 388116-31-2P,  
 4-(1-Methylpiperidin-4-yl)-1,3-dihydroindol-2-one  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (intermediate; prepn. and use of 4-heteroaryl-3-heteroarylidanyl-2-  
 indolinones and their use as protein kinase inhibitors)  
 RN 388116-26-5 CAPLUS  
 CN 2H-Indol-2-one, 1,3-dihydro-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)

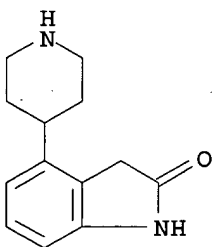
10/ 053,168



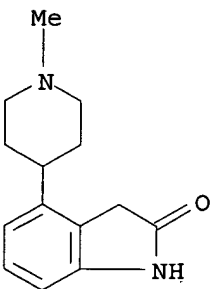
RN 388116-28-7 CAPLUS  
CN 1H-Indole, 4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 388116-29-8 CAPLUS  
CN 2H-Indol-2-one, 1,3-dihydro-4-(4-piperidinyl)- (9CI) (CA INDEX NAME)



RN 388116-31-2 CAPLUS  
CN 2H-Indol-2-one, 1,3-dihydro-4-(1-methyl-4-piperidinyl)- (9CI) (CA INDEX NAME)



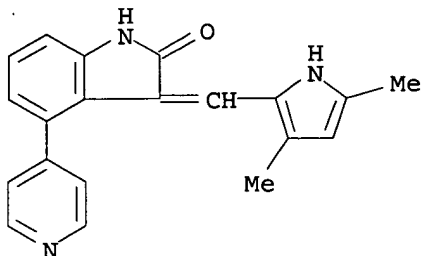
IT 388116-49-2P, 3-(3,5-Dimethyl-1H-pyrrol-2-ylmethylene)-4-(pyridin-4-yl)-1,3-dihydroindol-2-one  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. and use of 4-heteroaryl-3-heteroarylidenyl-2-indolinones and

10/ 053,168

their use as protein kinase inhibitors)

RN 388116-49-2 CAPLUS

CN 2H-Indol-2-one, 3-[(3,5-dimethyl-1H-pyrrol-2-yl)methylene]-1,3-dihydro-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



IT 388116-30-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactant; prepn. and use of 4-heteroaryl-3-heteroarylidenyl-2-indolinones and their use as protein kinase inhibitors)

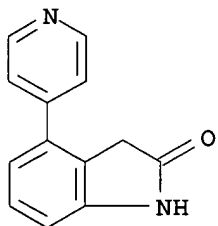
RN 388116-30-1 CAPLUS

CN 2H-Indol-2-one, 1,3-dihydro-4-(4-pyridinyl)-, monoacetate (9CI) (CA INDEX NAME)

CM 1

CRN 388116-26-5

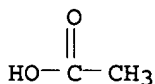
CMF C13 H10 N2 O



CM 2

CRN 64-19-7

CMF C2 H4 O2



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:10464 CAPLUS

DOCUMENT NUMBER: 136:85825

TITLE: Preparation of piperazinyl(or piperidinyl)-substituted indole derivatives for the treatment of CNS disorders

INVENTOR(S): Bang-Andersen, Benny; Felding, Jakob; Kehler, Jan

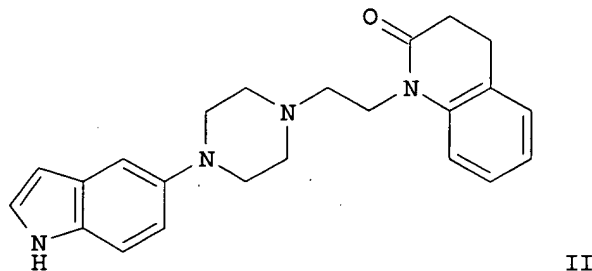
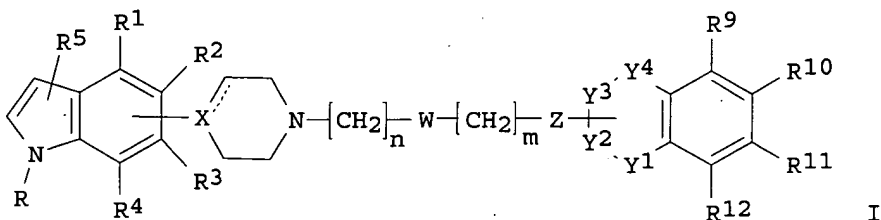
PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.



10/ 053,168

SOURCE: PCT Int. Appl., 39 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2002000645   | A1   | 20020103 | WO 2001-DK407   | 20010613 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| EP 1299380  | A1   | 20030409 | EP 2001-940241  | 20010613 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                 |          |
| NO 2002006029   | A    | 20021216 | NO 2002-6029    | 20021216 |
| PRIORITY APPLN. INFO.: DK 2000-1018 A 20000629<br>WO 2001-DK407 W 20010613  |      |          |                 |          |
| OTHER SOURCE(S): MARPAT 136:85825   |      |          |                 |          |
| GI  |      |          |                 |          |



AB The title compds. [I; Y1 = N, which is bound to Z, Z and Y2 = CH2, CO, CS, SO and SO2, Y3 = O, S, CHR7, Y4 = O, S, CHR8; or Y2 = N, which is bound to Z, Z and Y1 = CH2, CO, CS, SO and SO2, Y3 = CHR7, Y4 = O, S, CHR8; or Y2 = N, which is bound to Z, Z and Y3 = CH2, CO, CS, SO and SO2, Y1 = CHR6, Y4 = O, S, CHR8; W = a bond, O, S, CO, CS, SO, SO2; X = C, CH, N; n = 0-5; m = 0-5; n + m = 1-6; one of R1-R4 forms a bond to X and the others of R1-R4 and R5 and R9-R12 = H, halo, CN, etc.; R6-R8 = H, halo; R = H, alkyl,

acyl, etc.] and their pharmaceutically acceptable salts which are dopamine and serotonin receptor ligands, and therefore useful in the treatment of certain psychiatric and neurol. disorders, i. e. schizophrenia and other psychoses, anxiety disorders, depression, migraine, cognitive disorders, ADHD and sleep improvement, were prepd. and formulated. Thus, reacting 5-(piperazin-1-yl)-1H-indole with 1-(2-chloroethyl)-3,4-dihydroquinolin-2(1H)-one (preps. given) in the presence of LiBr, Et<sub>3</sub>N and DMF in THF and butanone afforded II.oxalate which showed 90% inhibition of the binding of [3H]YM-09151-2 to human dopamine D<sub>4,2</sub> receptors at 50 nM, and IC<sub>50</sub> of 29 nM against 5-HT<sub>2A</sub> binding.

IT 385815-21-4P 385815-22-5P 385815-32-7P

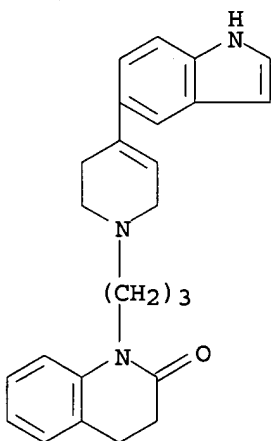
385815-33-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of piperazinyl(or piperidinyl)-substituted indole derivs. for the treatment of CNS disorders)

RN 385815-21-4 CAPLUS

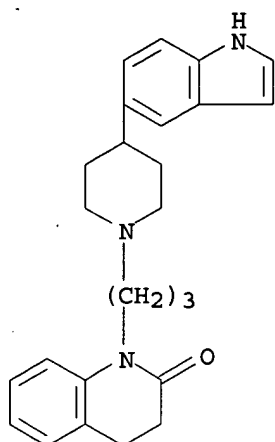
CN 2(1H)-Quinolinone, 1-[3-[3,6-dihydro-4-(1H-indol-5-yl)-1(2H)-pyridinyl]propyl]-3,4-dihydro-, hydrochloride (9CI) (CA INDEX NAME)



x HCl

RN 385815-22-5 CAPLUS

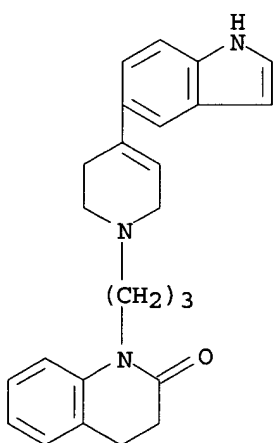
CN 2(1H)-Quinolinone, 3,4-dihydro-1-[3-[4-(1H-indol-5-yl)-1-piperidinyl]propyl]-, hydrochloride (9CI) (CA INDEX NAME)



x HCl

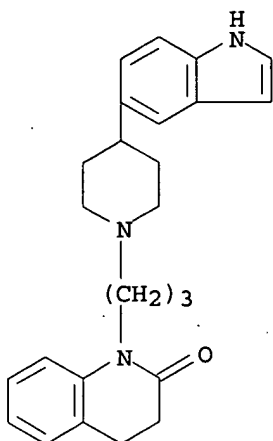
RN 385815-32-7 CAPLUS

CN 2(1H)-Quinolinone, 1-[3-[3,6-dihydro-4-(1H-indol-5-yl)-1(2H)-pyridinyl]propyl]-3,4-dihydro- (9CI) (CA INDEX NAME)

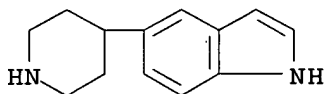


RN 385815-33-8 CAPLUS

CN 2(1H)-Quinolinone, 3,4-dihydro-1-[3-[4-(1H-indol-5-yl)-1-piperidinyl]propyl]- (9CI) (CA INDEX NAME)



IT 383861-22-1P, 5-(Piperidin-4-yl)-1H-indole  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (prepn. of piperazinyl(or piperidinyl)-substituted indole derivs. for  
 the treatment of CNS disorders)  
 RN 383861-22-1 CAPLUS  
 CN 1H-Indole, 5-(4-piperidinyl)- (9CI) (CA INDEX NAME)

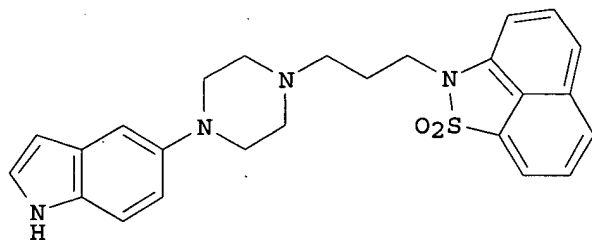
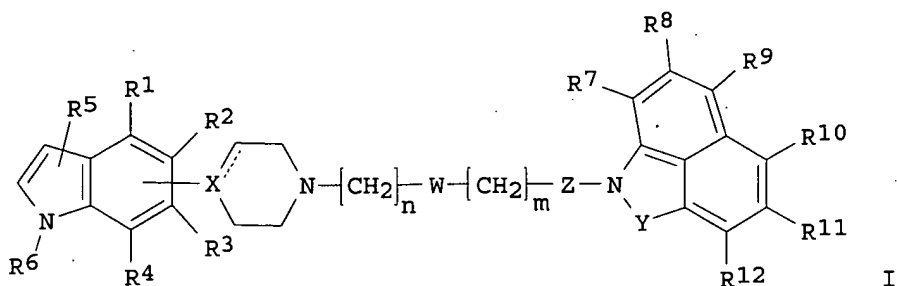


REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2001:935601 CAPLUS  
 DOCUMENT NUMBER: 136:69822  
 TITLE: Preparation of indole derivatives for the treatment of  
 CNS disorders  
 INVENTOR(S): Bang-Andersen, Benny; Larsen, Krestian; Kehler, Jan  
 PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.  
 SOURCE: PCT Int. Appl., 30 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2001098298   | A1   | 20011227 | WO 2001-DK408   | 20010613 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,<br>CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI,<br>FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,<br>KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,<br>MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,<br>TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,<br>MD, RU, TJ, TM<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,<br>DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, |      |          |                 |          |

BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1299384 A1 20030409 EP 2001-940242 20010613  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 NO 2002006028 A 20021216 NO 2002-6028 20021216  
 PRIORITY APPLN. INFO.: DK 2000-957 A 20000619  
 US 2000-212532P P 20000620  
 WO 2001-DK408 W 20010613  
 OTHER SOURCE(S): MARPAT 136:69822  
 GI



AB The title compds. [I; Y = CO, CS, SO, SO<sub>2</sub>, CH<sub>2</sub>; Z = CO, CS, SO, SO<sub>2</sub>, CH<sub>2</sub> (provided that only one of Y and Z = CO, CS, SO, SO<sub>2</sub>); W = a bond, O, S, CO, CS, SO, SO<sub>2</sub>; n = 0-5; m = 0-5 (n + m = 1-6); X = N, CH, C; R1-R5, R7-R12 = H, halo, CN, etc.; R6 = H, alkyl, alkenyl, etc.] which are dopamine and serotonin receptor ligands, and therefore are useful in the treatment of certain psychiatric and neurol. disorders, i. e. schizophrenia and other psychoses, anxiety disorders, depression, migraine, cognitive disorders, attention deficit hyperactivity disorder (ADHD) and sleep improvement, were prepd. and formulated. Thus, reacting 5-(piperazin-1-yl)-1H-indole with 2-(3-bromopropan-1-yl)-2H-naphtho[1,8-cd]isothiazole 1,1-dioxide (prepn. given) in DMF and butanone afforded II.HCl which showed IC<sub>50</sub> of 1.9 nM and 0.79 nM against D<sub>4</sub> binding and 5-HT<sub>2A</sub> binding, resp.

IT 383861-14-1P 383861-15-2P 383861-17-4P  
 383861-18-5P

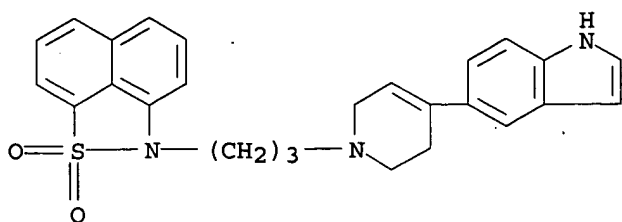
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of indole derivs. for the treatment of CNS disorders)

RN 383861-14-1 CAPLUS

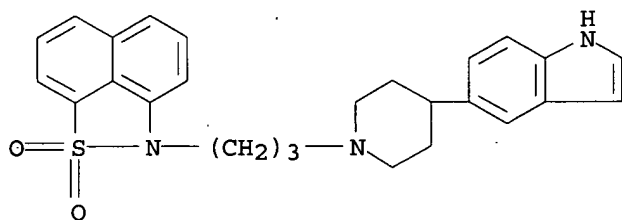
CN 2H-Naphth[1,8-cd]isothiazole, 2-[3-[3,6-dihydro-4-(1H-indol-5-yl)-1(2H)-pyridinyl]propyl]-, 1,1-dioxide, monohydrochloride (9CI) (CA INDEX NAME)

10/ 053,168



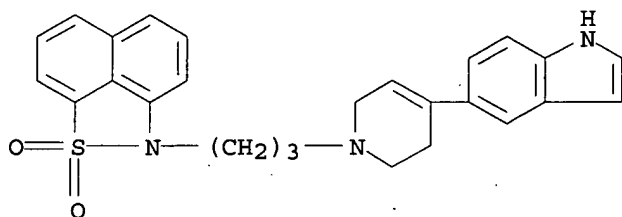
● HCl

RN 383861-15-2 CAPLUS  
CN 2H-Naphth[1,8-cd]isothiazole, 2-[3-[4-(1H-indol-5-yl)-1-piperidinyl]propyl]-, 1,1-dioxide, monohydrochloride (9CI) (CA INDEX NAME)

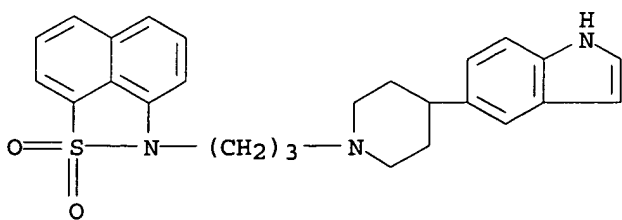


● HCl

RN 383861-17-4 CAPLUS  
CN 2H-Naphth[1,8-cd]isothiazole, 2-[3-[3,6-dihydro-4-(1H-indol-5-yl)-1(2H)-pyridinyl]propyl]-, 1,1-dioxide (9CI) (CA INDEX NAME)



RN 383861-18-5 CAPLUS  
CN 2H-Naphth[1,8-cd]isothiazole, 2-[3-[4-(1H-indol-5-yl)-1-piperidinyl]propyl]-, 1,1-dioxide (9CI) (CA INDEX NAME)



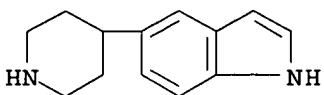
10/ 053,168

IT 383861-22-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. of indole derivs. for the treatment of CNS disorders)

RN 383861-22-1 CAPLUS

CN 1H-Indole, 5-(4-piperidinyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:833276 CAPLUS

DOCUMENT NUMBER: 135:371989

TITLE: Preparation of novel multicyclic compounds and their  
amino acid derivatives as inhibitors of enzymes such  
as poly(ADP-ribose) polymerase

INVENTOR(S): Ator, Mark A.; Bihovsky, Ron; Chatterjee, Sankar;  
Dunn, Derek; Hudkins, Robert L.

PATENT ASSIGNEE(S): Cephalon, Inc., USA

SOURCE: PCT Int. Appl., 209 pp.

CODEN: PIXXD2

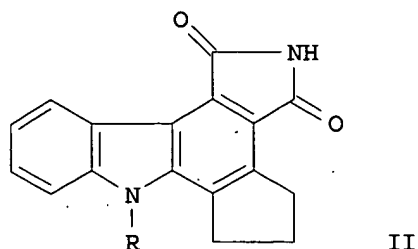
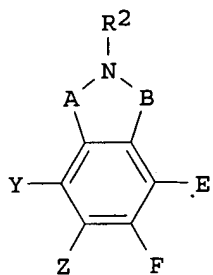
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE       |
|------------------------|--|----------|-----------------|------------|
| WO 2001085686          | A2   | 20011115 | WO 2001-US14996 | 20010509   |
| WO 2001085686          | A3   | 20020530 |                 |            |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |            |
| RW:                    | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG   |          |                 |            |
| US 2002028815          | A1   | 20020307 | US 2001-850858  | 20010508   |
| EP 1294725             | A2   | 20030326 | EP 2001-935215  | 20010509   |
| R:                     | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |          |                 |            |
| NO 2002005376          | A  | 20030108 | NO 2002-5376    | 20021108   |
| PRIORITY APPLN. INFO.: |  |          | US 2000-202947P | P 20000509 |
|                        |  |          | US 2001-850858  | A 20010508 |
|                        |  |          | WO 2001-US14996 | W 20010509 |
| OTHER SOURCE(S):       | MARPAT 135:371989  |          |                 |            |
| GI                     |  |          |                 |            |



AB The title compds. such as penta[a]pyrrolo[3,4-c]carbazole, hexano[a]pyrrolo[3,4-c]carbazole, pyrrolo[3,4-c]carbazole, and furano[a-3,2]pyrrolo[3,4-c]carbazole derivs. [I; A, B = CO, CH(OR<sub>3</sub>), CH(SR<sub>3</sub>), CH<sub>2</sub>, CHR<sub>3</sub>, CHR<sub>3</sub>CHR<sub>4</sub>, CR<sub>3</sub>R<sub>4</sub>, COR<sub>3</sub>, N:CR<sub>3</sub>, SO, SO<sub>2</sub> (wherein R<sub>3</sub>, R<sub>4</sub> = H, optionally substituted lower alkyl or aryl); Y and Z, together with the carbon to which they are attached, form an (un)substituted mono- or bicyclic aryl or bicyclic heteroaryl, or C3-5 heteroaryl; E, F = lower alkyl or E and F, together with the carbon to which they are attached, form an (un)substituted C4-7 cycloalkyl, C3-6 heterocycloalkyl or heteroaryl, or an (un)substituted heterocycloalkyl endocyclically comprising at least one group G (wherein G = O, S, SO, SO<sub>2</sub>, NR<sub>2</sub>, NR<sub>2</sub>CO, NR<sub>2</sub>CONR<sub>3</sub>, NR<sub>2</sub>SO<sub>2</sub>, NR<sub>3</sub>SO<sub>2</sub>; R<sub>2</sub> = H, optionally substituted lower alkyl or alkanoyl, CHO, acetyl, lower alkylsulfonyl, arylsulfonyl, an optionally protected amino acid)] are prepd. These compds. are effective in the treatment of diseases or disease states related to the activity of enzymes such as poly(ADP-ribose) polymerase (PARP), vascular endothelial growth factor receptor kinase (VEGFR2 kinase), and MLK3 kinase (a member of the mixed lineage kinase family), including, for example, traumatic central nervous system injuries, neurodegenerative diseases (in particular Parkinson's, Huntington's, or Alzheimer's disease), inflammation, cerebral or cardiac ischemia, endotoxic shock, diabetes, or cellular proliferative disorders (in particular cancer, solid tumors, diabetic retinopathy, intraocular neovascular syndromes, macular degeneration, rheumatoid arthritis, psoriasis, or endometriosis). They also suppress the formation of blood vessels (angiogenesis) and prevent neuronal degrdn. assocd. with traumatic central nervous system injuries. Thus, 2H-1,3,4,5,6,7-hexahydrocyclopenta[a]pyrrolo[3,4-c]carbazole-1,3-dione (II; R = H) (prepn. given) was treated with NaH in DMF at room temp. for 30 min and condensed with a stirred mixt. of Boc-Lys(Boc)-OH dicyclohexylamine salt, TBTU, N-Methylmorpholine, and DMF at room temp. for 1 h, followed by treatment of the product with 4 N HCl in dioxane to give II (R = H-Lys). II (R = H-Lys) showed IC<sub>50</sub> of .mu.g/mL against of 22 nM against PARP.

IT 374071-32-6P

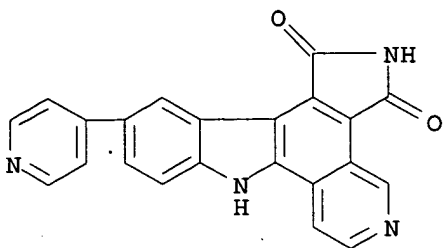
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of novel multicyclic compds. and their amino acid derivs. as inhibitors of enzymes for treatment of diseases related to enzymes such as poly(ADP-ribose) polymerase, VEGFR2 kinase, and MLK3 kinase)

RN 374071-32-6 CAPLUS

CN Pyrido[4,3-a]pyrrolo[3,4-c]carbazole-1,3(2H,8H)-dione, 11-(4-pyridinyl)-(9CI) (CA INDEX NAME)





L3 ANSWER 14 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:817246 CAPLUS

DOCUMENT NUMBER: 135:357843

TITLE: Preparation of 2-Aryl indole derivatives for use as tachykinin receptor antagonists

INVENTOR(S): Dinnell, Kevin; Elliott, Jason Matthew; Hollingworth, Gregory John; Ridgill, Mark Peter; Shaw, Duncan Edward

PATENT ASSIGNEE(S): UK

SOURCE: U.S. Pat. Appl. Publ., 37 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

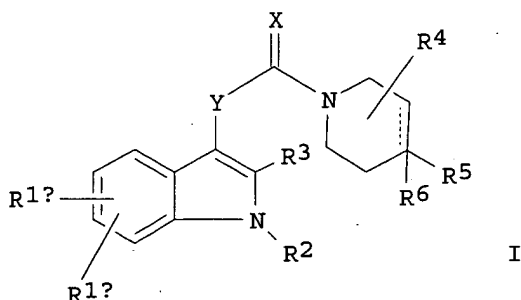
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE              | APPLICATION NO. | DATE       |
|------------------------|------|-------------------|-----------------|------------|
| US 2001039286          | A1   | 20011108          | US 2001-782422  | 20010213   |
| PRIORITY APPLN. INFO.: |      |                   | GB 2000-3397    | A 20000214 |
| OTHER SOURCE(S):       |      | MARPAT 135:357843 |                 |            |

GI



AB 2-Aryl indole derivs. I (wherein R1a, R1b, and R2 = a variety of substituents; R3 = optionally substituted Ph, biphenyl or naphthyl or heteroaryl group; R4 = H, (C1-6)alkyl, carbonyl (=O), (CH2)pphenyl or a (C1-2)alkylene bridge across the piperidine ring; R5 and R6 = variety of substituents; or R5 and R6 together are linked so as to form an optionally substituted 5-or 6-membered ring; X = O or S, two H atoms, boxHNH or boxHN(C1-6 alkyl); Y = straight or branched (C1-4)alkylene, (C2-4)alkenylene or (C2-4)alkynylene chain; the dotted line represents an optional double bond; m = 0,1,2,3,4; n = 1,2,3,4; and p = 1,2,3,4), or a pharmaceutically acceptable salt thereof, were prepd., and their use as tachykinin receptor antagonists evaluated. Thus, diisopropylethylamine and bromoacetonitrile were added to a loaded resin (synthetic prepn. given) in N-methylpyrrolidinone, to which was added a soln. of

6-(methylsulfonyl)spiro-[2H-1-benzopyran-2,4'-piperidin]-4(3H)-one in THF to give 1'-{3-[5-chloro-2-(4-chlorophenyl)-1H-indol-3-yl]-1-oxopropyl}-6-(methylsulfonyl)spiro(2H-1-benzopyran-2,4'-piperidin)-4(3H)-one. The compds. are of particular use in the treatment or prevention of depression, anxiety, pain, inflammation, migraine, emesis or postherpetic neuralgia. Biol. data are given.

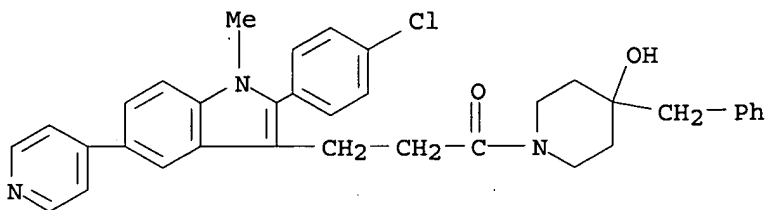
IT 371970-19-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of aryl indole derivs. as tachykinin receptor antagonists for treatment for)

RN 371970-19-3 CAPLUS

CN 4-Piperidinol, 1-[3-[2-(4-chlorophenyl)-1-methyl-5-(4-pyridinyl)-1H-indol-3-yl]-1-oxopropyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)



L3 ANSWER 15 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:730745 CAPLUS

DOCUMENT NUMBER: 135:288799

TITLE: Preparation of 2,3,4,5-tetrahydro-1H-[1,4]diazepino[1,7-a]indoles as 5-HT receptor antagonists for treatment of CNS disorders

INVENTOR(S): Ennis, Michael Dalton; Hoffman, Robert Louis; Ghazal, Nabil B.; Olson, Rebecca M.

PATENT ASSIGNEE(S): Pharmacia + Upjohn Company, USA

SOURCE: PCT Int. Appl., 331 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2001072752 | A2   | 20011004 | WO 2001-US4950  | 20010308 |
| WO 2001072752 | A3   | 20030417 |                 |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

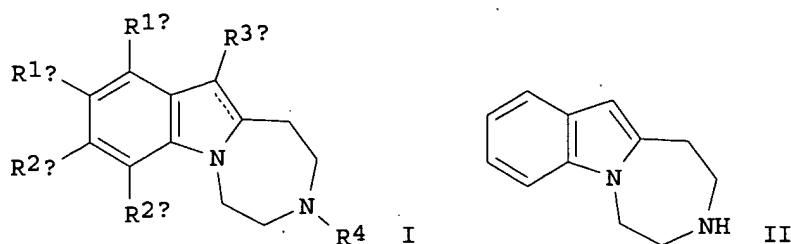
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002002161 A1 20020103 US 2001-803242 20010308

PRIORITY APPLN. INFO.: US 2000-189103P P 20000314

OTHER SOURCE(S): MARPAT 135:288799

GI



AB Title compds. I [wherein R1a, R1b, R2a, and R2b = independently (a) H, halo, CN, CF<sub>3</sub>, OCF<sub>3</sub>, OR<sub>5</sub>, CONR<sub>5</sub>R<sub>6</sub>, COR<sub>5</sub>, CO<sub>2</sub>R<sub>5</sub>, Y(CH<sub>2</sub>)<sub>m</sub>XR<sub>5</sub>, YCO(CH<sub>2</sub>)<sub>m</sub>XR<sub>5</sub>; m = 0-3; Y = CH<sub>2</sub>, S, O, or NR<sub>6</sub>; X = CH<sub>2</sub>, S, O, NR<sub>6</sub>; (b) (CH<sub>2</sub>)<sub>p</sub>Ar; p = 0-3; Ar = (un)substituted (hetero)aryl or (c) (un)substituted (cyclo)alkyl, (cyclo)alkenyl, or (cyclo)alkynyl; R<sub>3</sub> = (a) H, halo, CN, CF<sub>3</sub>, OCF<sub>3</sub>, alkyl, Ar, OR<sub>5</sub>, SR<sub>5</sub>, CHO, CONR<sub>5</sub>R<sub>6</sub>, COR<sub>5</sub>, CO<sub>2</sub>R<sub>5</sub>, Yo(CH<sub>2</sub>)<sub>n</sub>XR<sub>5</sub>, COCONXR<sub>5</sub>, Yo(CH<sub>2</sub>)<sub>n</sub>N(R<sub>6</sub>)CONR<sub>5</sub>R<sub>6</sub>; o = 0 or 1; n = 0-3; X = CH, S, O, or NR<sub>6</sub>; Y = CH, S, O or NR<sub>6</sub>; Ar = (un)substituted (hetero)aryl; (b) (un)substituted (cyclo)alkyl, (cyclo)alkenyl, or (cyclo)alkynyl; R<sub>4</sub>, R<sub>5</sub>, and R<sub>6</sub> = independently (a) H or (un)substituted (cyclo)alkyl, (cyclo)alkenyl, or (cyclo)alkynyl; (b) (CH<sub>2</sub>)<sub>p</sub>Ar; p = 0-3; Ar = (un)substituted (hetero)aryl; or stereoisomers or pharmaceutically acceptable salts thereof] were prepd. For example, 2,3,4,5-tetrahydro-1H-[1,4]diazepino[1,7-a]indole.bul.HCl (II.bul.HCl) was prepd. in a multi-step synthesis starting from Et H malonate and 2-nitrophenylacetic acid and involving the cyclization of the Et [1-(2-bromoethyl)-2,3-dihydro-1H-indol-2-yl]acetate intermediate to the tetrahydro-1H-[1,4]diazepino[1,7]indol-2(3H)-one. I are useful as 5-HT receptor antagonists for the treatment of a variety of central nervous system disorders (no data).

IT 364347-16-0P 364348-26-5P 364349-42-8P

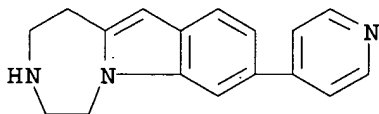
364350-49-2P 364351-57-5P 364352-67-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 1H-[1,4]diazepino[1,7-a]indoles as 5-HT receptor inhibitors for treatment of CNS disorders)

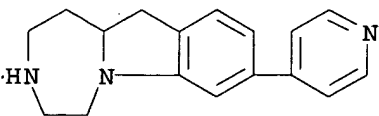
RN 364347-16-0 CAPLUS

CN 1H-[1,4]Diazepino[1,7-a]indole, 2,3,4,5-tetrahydro-8-(4-pyridinyl)- (9CI)  
(CA INDEX NAME)



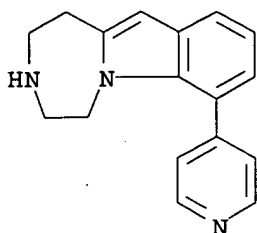
RN 364348-26-5 CAPLUS

CN 1H-[1,4]Diazepino[1,7-a]indole, 2,3,4,5,11,11a-hexahydro-8-(4-pyridinyl)- (9CI)  
(CA INDEX NAME)

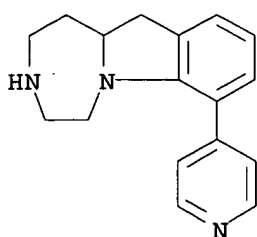


RN 364349-42-8 CAPLUS

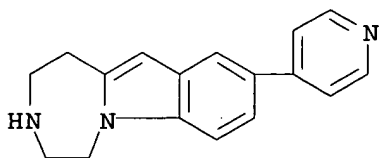
CN 1H-[1,4]Diazepino[1,7-a]indole, 2,3,4,5-tetrahydro-7-(4-pyridinyl)- (9CI)  
(CA INDEX NAME)



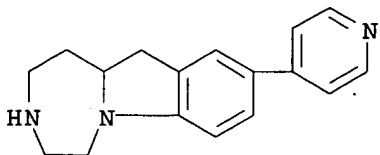
RN 364350-49-2 CAPLUS  
 CN 1H-[1,4]Diazepino[1,7-a]indole, 2,3,4,5,11,11a-hexahydro-7-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 364351-57-5 CAPLUS  
 CN 1H-[1,4]Diazepino[1,7-a]indole, 2,3,4,5-tetrahydro-9-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 364352-67-0 CAPLUS  
 CN 1H-[1,4]Diazepino[1,7-a]indole, 2,3,4,5,11,11a-hexahydro-9-(4-pyridinyl)- (9CI) (CA INDEX NAME)



L3 ANSWER 16 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:709746 CAPLUS

DOCUMENT NUMBER: 135:257261

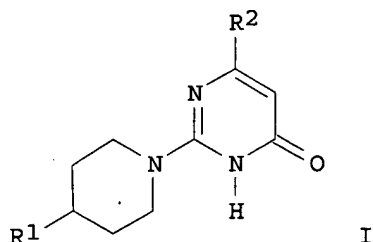
TITLE: Preparation of 2-(piperidin-1-yl)pyrimidones for preventive and/or therapeutic treatment of a neurodegenerative disease caused by abnormal activity of GSK3.beta.

INVENTOR(S): Almario-Garcia, Antonio; Frost, Jonathan Reid; Li-Tak, Adrien

PATENT ASSIGNEE(S): Sanofi-Synthelabo, Fr.; Mitsubishi-Tokyo  
Pharmaceuticals, Inc.  
SOURCE: Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE       |
|--|------|----------|-----------------|------------|
| EP 1136489   | A1   | 20010926 | EP 2000-400802  | 20000323   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO   |      |          |                 |            |
| WO 2001070728  | A1   | 20010927 | WO 2001-EP3639  | 20010322   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,<br>CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,<br>HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,<br>LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,<br>RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,<br>VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,<br>DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,<br>BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG |      |          |                 |            |
| PRIORITY APPLN. INFO.:   |      |          | EP 2000-400801  | A 20000323 |
|  |      |          | EP 2000-400802  | A 20000323 |
|  |      |          | EP 2000-400803  | A 20000323 |

OTHER SOURCE(S): MARPAT 135:257261  
GI



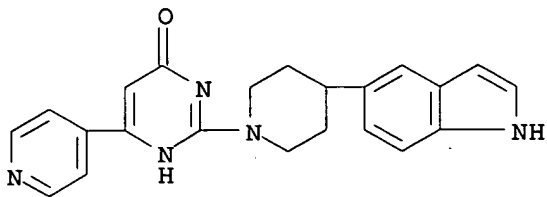
AB The title compds. [I; R1 = (un)substituted aryl, heterocyclic ring having 1-4 hetero atoms selected from O, S, and N atoms, (un)substituted alkyl; R2 = pyridyl optionally substituted by alkyl, alkoxy or halo] and their salts, useful for preventive and/or therapeutic treatment of a neurodegenerative disease caused by abnormal activity of GSK3.beta., such as Alzheimer's disease, Parkinson's disease, frontoparietal dementia, corticobasal degeneration, Pick's disease, cerebrovascular accidents, brain and spinal trauma, and peripheral neuropathy, were prepd. and formulated. E.g., a 3-step synthesis of I [R1 = Ph; R2 = 4-pyridyl] was given. All exemplified compds. I showed IC50's of 0.5-10 .mu.M against GSK3.beta..

IT 362467-54-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of 2-(piperidin-1-yl)pyrimidones for preventive and/or therapeutic treatment of a neurodegenerative disease caused by abnormal activity of GSK3.beta.)

10/ 053,168

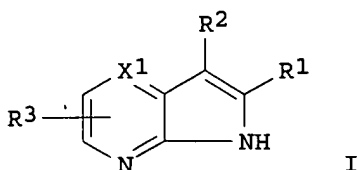
RN 362467-54-7 CAPLUS  
CN 4(1H)-Pyrimidinone, 2-[4-(1H-indol-5-yl)-1-piperidinyl]-6-(4-pyridinyl)-  
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2001:489395 CAPLUS  
DOCUMENT NUMBER: 135:92651  
TITLE: Preparation of azaindoles as protein kinase inhibitors  
INVENTOR(S): Cox, Paul Joseph; Majid, Tahir Nadeem; Lai, Justine  
Yeun Quai; Morley, Andrew David; Amendola, Shelley;  
Deprets, Stephanie; Edlin, Chris  
PATENT ASSIGNEE(S): Aventis Pharma Ltd., UK  
SOURCE: PCT Int. Appl., 270 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE       |
|--|------|----------|-----------------|------------|
| WO 2001047922  | A2   | 20010705 | WO 2000-GB4993  | 20001227   |
| WO 2001047922  | A3   | 20020117 |                 |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,<br>CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,<br>HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,<br>LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,<br>SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,<br>YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,<br>DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,<br>BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG   |      |          |                 |            |
| EP 1263759   | A2   | 20021211 | EP 2000-985695  | 20001227   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                 |            |
| BR 2000017038  | A    | 20030107 | BR 2000-17038   | 20001227   |
| BG 106836  | A    | 20030430 | BG 2002-106836  | 20020618   |
| NO 2002003032  | A    | 20020621 | NO 2002-3032    | 20020621   |
| PRIORITY APPLN. INFO.:   |      |          |                 |            |
|  |      |          | GB 1999-30698   | A 19991224 |
|  |      |          | US 2000-215818P | P 20000705 |
|  |      |          | WO 2000-GB4993  | W 20001227 |
| OTHER SOURCE(S): MARPAT 135:92651  |      |          |                 |            |
| GI   |      |          |                 |            |



AB The invention is directed to compns. contg. physiol. active compds. of general formula [I; wherein R1 is (un)substituted aryl or heteroaryl; R2 represents hydrogen, acyl, cyano, halo, lower alkenyl or lower alkyl optionally substituted by a substituent selected from cyano, heteroaryl, heterocycloalkyl, -Z1R8, -CONY3Y4, -CO2R8, -NY3Y4, -N(R6)COR7, -N(R6)CONY3Y4, -N(R6)CO2R7, -N(R6)SO2R7, -N(R6)SO2NY3Y4 and one or more halogen atoms; R3 represents hydrogen, aryl, cyano, halo, heteroaryl, lower alkyl, -CO2R5 or -CONY3Y4; and X1 represents N, CH, C-halo, C-CN, C-R7, C-NY3Y4, C-OH, C-Z2R7, C-CO2R5, C-CONY3Y4, C-N(R8)COR7, C-SO2NY3Y4, C-N(R8)SO2R7, C-alkenyl, C-alkynyl or C-NO2; wherein R5 represents hydrogen, alkyl, alkenyl, aryl, arylalkyl, heteroaryl or heteroarylalkyl; R6 represents hydrogen or lower alkyl; R7 represents alkyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, heteroaryl, heteroarylalkyl, heterocycloalkyl or heterocycloalkylalkyl; R8 represents hydrogen or lower alkyl; represents; Y3 and Y4 are independently hydrogen, alkenyl, alkyl, aryl, arylalkyl, cycloalkyl, heteroaryl or heteroarylalkyl; or the group -NY3Y4 may form a cyclic amine; Z1 represents O or S; Z2 represents O or S(O)n; n is zero or an integer 1 or 2] and their prodrugs, and pharmaceutically acceptable salts and solvates of such compds. and their prodrugs. These compds. have valuable pharmaceutical properties, in particular the ability to inhibit protein kinases, esp. Syk kinase, and are useful for the treatment of asthma, psoriasis, joint inflammation, and inflammatory bowel disease. Thus, a stirred soln. of diisopropylamine (59.9 mL) in THF (1,400 mL), at -15 .degree.C and under nitrogen, was treated with a soln. of n-butyllithium in hexanes (131 mL, 1.6 M) over 25 min at <-10.degree.. After stirring for 30 min the mixt. was treated with methylpyrazine (26.8 g) over 15 min, then stirred for 1 h and then treated with a soln. of 5-methoxy-1-methyl-1H-indole-3-carbonitrile (53 g) in THF (600 mL) over 1 h at <-10.degree., and the reaction mixt. was allowed to warm to room temp. over 2 h and then stood overnight to give, after workup and flash chromatog., 6-(5-Methoxy-1-methyl-1H-indol-3-yl)-5H-pyrrolo[2,3-b]pyrazine (19.4 g) as a gray solid. I showed IC50 of 10-100 nM against Syk kinase.

IT 348639-46-3P 348640-91-5P

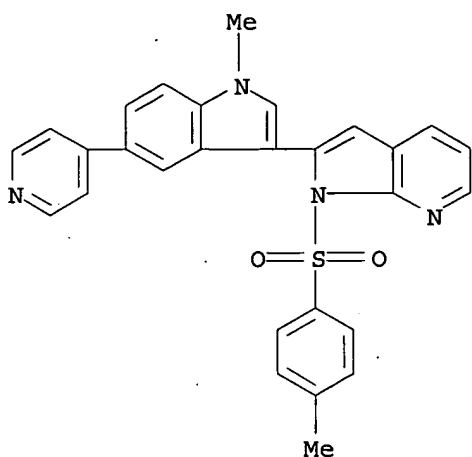
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of azaindoles as protein kinase inhibitors)

RN 348639-46-3 CAPLUS

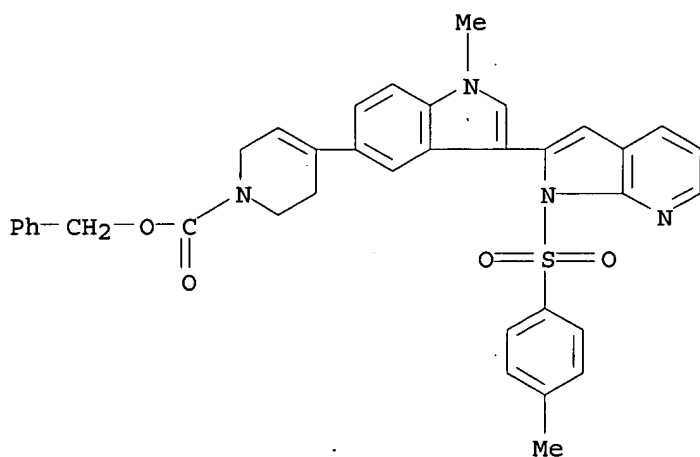
CN 1H-Pyrrolo[2,3-b]pyridine, 1-[(4-methylphenyl)sulfonyl]-2-[1-methyl-5-(4-pyridinyl)-1H-indol-3-yl]- (9CI) (CA INDEX NAME)

10/ 053,168



RN 348640-91-5 CAPLUS

CN 1(2H)-Pyridinecarboxylic acid, 3,6-dihydro-4-[1-methyl-3-[1-[(4-methylphenyl)sulfonyl]-1H-pyrrolo[2,3-b]pyridin-2-yl]-1H-indol-5-yl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

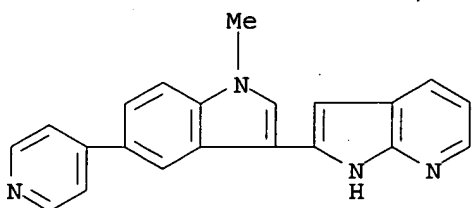


IT 348639-47-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of azaindoles as protein kinase inhibitors)

RN 348639-47-4 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine, 2-[1-methyl-5-(4-pyridinyl)-1H-indol-3-yl]- (9CI) (CA INDEX NAME)





L3 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:453066 CAPLUS

DOCUMENT NUMBER: 135:61239

TITLE: Preparation of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative diseases

INVENTOR(S): Al-Awar, Rima Salim; Hecker, Kyle Andrew; Huang, Jianping; Joseph, Sajjan; Li, Tiechao; Paal, Michael; Rathnachalam, Radhakrishnan; Ray, James Edward; Shih, Chuan; Waid, Philip Parker; Zhou, Xun; Zhu, Guoxin

PATENT ASSIGNEE(S): Eli Lilly and Company, USA

SOURCE: PCT Int. Appl., 261 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2001044247 | A2   | 20010621 | WO 2000-US33273 | 20001218 |
| WO 2001044247 | A3   | 20020103 |                 |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

|            |    |          |                |          |
|------------|----|----------|----------------|----------|
| EP 1242420 | A2 | 20020925 | EP 2000-984043 | 20001218 |
|------------|----|----------|----------------|----------|

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:  
 US 1999-171087P P 19991216  
 US 1999-171220P P 19991216  
 WO 2000-US33273 W 20001218

OTHER SOURCE(S): CASREACT 135:61239; MARPAT 135:61239

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title compds. [I; A, B = O, S; X, Y = H; or X and Y, taken together, form a bond; R1 = H, alkyl; R2 = halo, CN, alkyl, etc.; R3 = aryl, heteroaryl, etc.; R4 = H, alkyl, etc.; R5 = halo, CN, alkyl, etc.; R6 = alkyl; R7 = alkoxycarbonyl, (CH<sub>2</sub>)<sub>m</sub>Z (m = 0-5; Z = halo, OH, etc.); Q1 = O, SOn (n = 0-2), (CH<sub>2</sub>)<sub>1-3</sub>; Q2 = carbon-carbon single or double bond, etc.; Q3 = (CH<sub>2</sub>)<sub>1-3</sub>], useful for inhibiting CDK4, were prep'd. and formulated. E.g., a multi-step synthesis of II which showed activity (0.1055 .mu.M) in assay of cyclin D1-CDK4 kinase with the ING peptide as substrate, and also was found to inhibit cell growth and Rb (retinoblastoma protein) phosphorylation, was given.

IT 345261-58-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

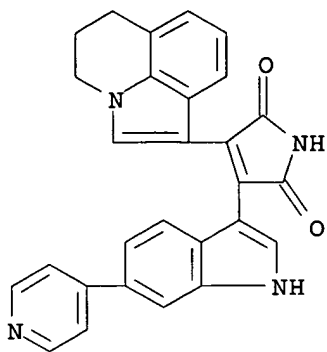
(prepn. of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative

10/ 053,168

diseases)

RN 345261-58-7 CAPLUS

CN 1H-Pyrrole-2,5-dione, 3-(5,6-dihydro-4H-pyrrolo[3,2,1-ij]quinolin-1-yl)-4-[6-(4-pyridinyl)-1H-indol-3-yl]- (9CI) (CA INDEX NAME)



IT 345262-17-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative diseases)

RN 345262-17-1 CAPLUS

CN 1H-Indolo[2,3-a]pyrido[3,2,1-jk]pyrrolo[3,4-c]carbazole-7,9(8H,14H)-dione, 2,3-dihydro-12-(4-pyridinyl)-, monohydrochloride (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

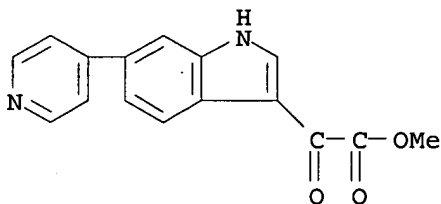
IT 345265-14-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of 11H,12H,14H-pyrrolo[3,4-c]quinolino[8',8a',1':3,2,1]-pyrrolo[2,3-a]carbazole-5,7-diones for the treatment of proliferative diseases)

RN 345265-14-7 CAPLUS

CN 1H-Indole-3-acetic acid, .alpha.-oxo-6-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



L3 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:321176 CAPLUS

DOCUMENT NUMBER: 135:122367

TITLE: 2-Aryl Indole NK1 receptor antagonists: optimization of indole substitution

AUTHOR(S): Cooper, L. C.; Chicchi, G. G.; Dinnell, K.; Elliott, J. M.; Hollingworth, G. J.; Kurtz, M. M.; Locker, K. L.; Morrison, D.; Shaw, D. E.; Tsao, K.-L.; Watt, A. P.; Williams, A. R.; Swain, C. J.

CORPORATE SOURCE: Department of Medicinal Chemistry, Merck Sharp & Dohme

SOURCE: Research Laboratories, Neuroscience Research Centre,  
Harlow, Essex, CM20 2QR, UK  
Bioorganic & Medicinal Chemistry Letters (2001),  
11(9), 1233-1236  
CODEN: BMCLE8; ISSN: 0960-894X

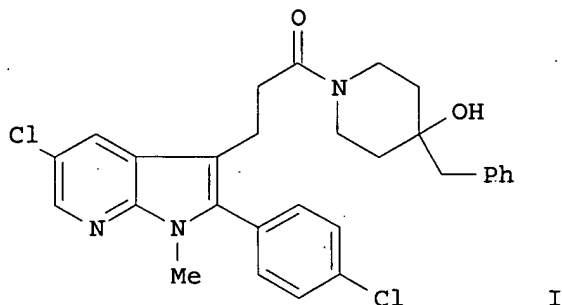
PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:122367

GI

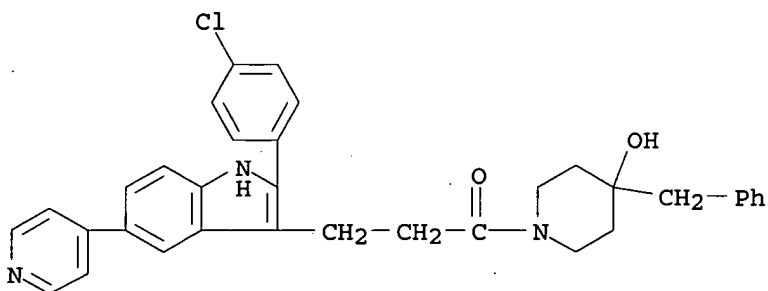


AB The synthesis and biol. evaluation of a series of 2-aryl indoles, e.g. I,  
with high affinity for the human neurokinin-1 (hNK1) receptor are  
reported, concg. on optimization of the indole substitution.

IT 351227-19-5P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); SPN (Synthetic preparation); BIOL (Biological  
study); PREP (Preparation)  
(optimization of the indole substitution of aryl indole NK1 receptor  
antagonists)

RN 351227-19-5 CAPLUS

CN 4-Piperidinol, 1-[3-[2-(4-chlorophenyl)-5-(4-pyridinyl)-1H-indol-3-yl]-1-  
oxopropyl]-4-(phenylmethyl)- (9CI) (CA INDEX NAME)

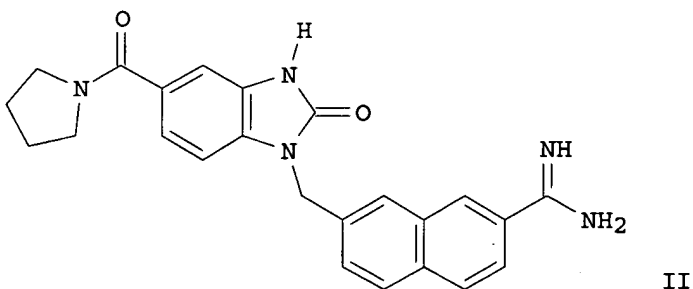
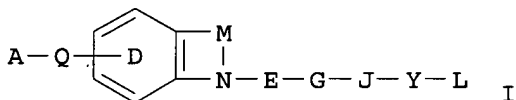


REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2001:137189 CAPLUS  
DOCUMENT NUMBER: 134:193446  
TITLE: Preparation of heterocyclic compounds as inhibitors of  
factor Xa  
INVENTOR(S): Zhu, Bing-Yan; Scarborough, Robert M.; Clizbe, Lane;  
Doughan, Brandon; Jia, Zhaozhong-Jon; Kane-Maguire,  
Kim; Marlowe, Charles; Song, Yonghong; Su, Ting; Teng,

Willy; Zhang, Penglie  
 PATENT ASSIGNEE(S): Cor Therapeutics, Inc., USA; et al.  
 SOURCE: PCT Int. Appl., 387 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 2001012600  | A1   | 20010222 | WO 2000-US21742 | 20000810 |
| WO 2001012600  | C2   | 20020912 |                 |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG<br>US 6534535 B1 20030318 US 2000-636804 20000810<br>PRIORITY APPLN. INFO.: US 1999-148627P P 19990812<br>US 2000-202202P P 20000505<br>OTHER SOURCE(S): MARPAT 134:193446<br>GI |      |          |                 |          |



AB The title compds. [I; A = alkyl, cycloalkyl, (un)substituted Ph, etc.; Q = a direct link, CH<sub>2</sub>, CO, etc.; D = (un)substituted Ph, 6-membered heteroaryl having 1-2 ring N atoms; M = NR<sub>16</sub>CO, NR<sub>16</sub>CS, CR<sub>17</sub>R<sub>18</sub>CO, etc.; R<sub>16</sub>-R<sub>18</sub> = H, halo, alkyl, etc.; E = a direct link, CO, CONR<sub>5</sub>, etc.; R<sub>5</sub> = alkyl, alkenyl, alkynyl, etc.; G = a direct link, CR<sub>7</sub>R<sub>8</sub>, CR<sub>7a</sub>R<sub>8a</sub>CR<sub>7b</sub>R<sub>8b</sub>, CR<sub>7c</sub>:CR<sub>8c</sub>; R<sub>7</sub>, R<sub>8</sub>, R<sub>7a</sub>, R<sub>7b</sub>, R<sub>7c</sub>, R<sub>8a</sub>, R<sub>8b</sub>, R<sub>8c</sub> = H, halo, alkyl, etc.; J = a direct link, O, S, etc.; Y = (un)substituted Ph, naphthyl, monocyclic or fused bicyclic heterocyclyl; L = H, CN, CONR<sub>12</sub>R<sub>13</sub>; R<sub>12</sub>, R<sub>13</sub> = H, alkyl, OH, etc.] having activity against mammalian factor Xa, and useful in vitro or in vivo for preventing or treating coagulation disorders, were prepd. and formulated. E.g., a multi-step synthesis of the title compd. II was given.

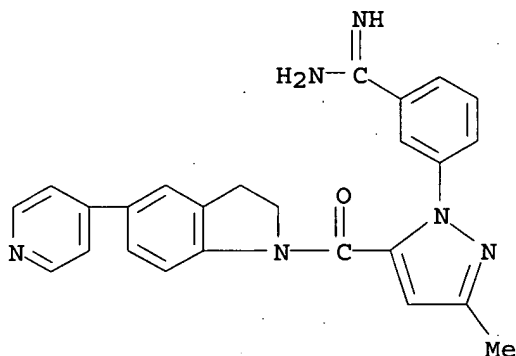
10/ 053,168

IT 327045-79-4P 327045-80-7P 327045-81-8P  
327045-87-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of heterocyclic compds. as inhibitors of factor Xa)

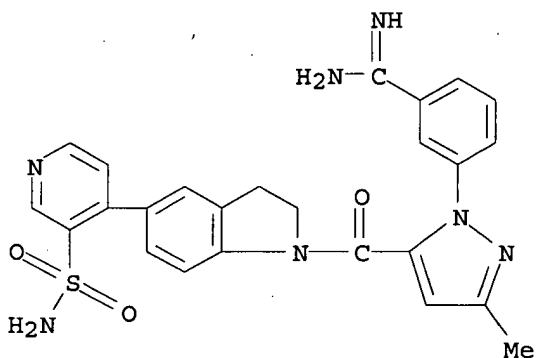
RN 327045-79-4 CAPLUS

CN 1H-Indole, 1-[[1-[3-(aminoiminomethyl)phenyl]-3-methyl-1H-pyrazol-5-yl]carbonyl]-2,3-dihydro-5-(4-pyridinyl)- (9CI) (CA INDEX NAME)



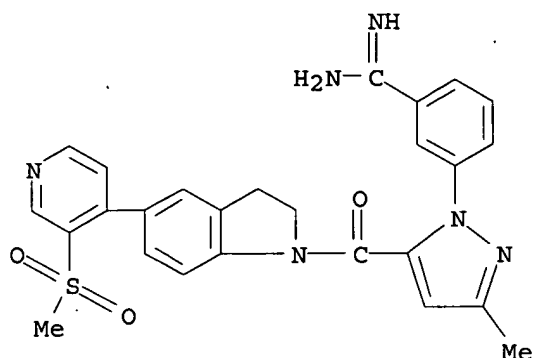
RN 327045-80-7 CAPLUS

CN 1H-Indole, 1-[[1-[3-(aminoiminomethyl)phenyl]-3-methyl-1H-pyrazol-5-yl]carbonyl]-5-[3-(aminosulfonyl)-4-pyridinyl]-2,3-dihydro- (9CI) (CA INDEX NAME)



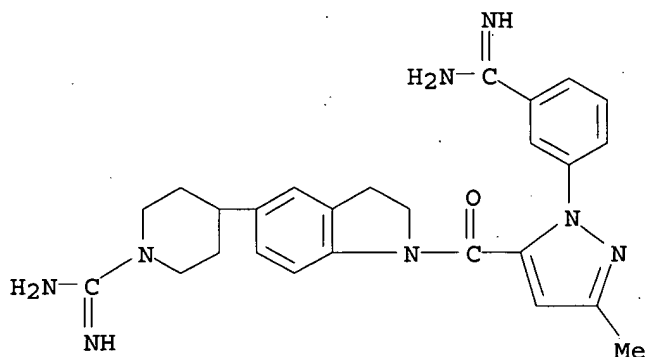
RN 327045-81-8 CAPLUS

CN 1H-Indole, 1-[[1-[3-(aminoiminomethyl)phenyl]-3-methyl-1H-pyrazol-5-yl]carbonyl]-2,3-dihydro-5-[3-(methylsulfonyl)-4-pyridinyl]- (9CI) (CA INDEX NAME)



RN 327045-87-4 CAPLUS

CN 1H-Indole, 1-[[1-[3-(aminoiminomethyl)phenyl]-3-methyl-1H-pyrazol-5-yl]carbonyl]-5-[1-(aminoiminomethyl)-4-piperidinyl]-2,3-dihydro- (9CI)  
(CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 21 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:63967 CAPLUS

DOCUMENT NUMBER: 134:131423

TITLE: Preparation of aminoalkylindoles and analogs as 5-HT1D receptor ligands

INVENTOR(S): Edwards, Louise; Isaac, Methvin; Maddaford, Shawn; Slassi, Abdelmalik; Xin, Tao

PATENT ASSIGNEE(S): NPS Allelix Corp., Can.

SOURCE: PCT Int. Appl., 71 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

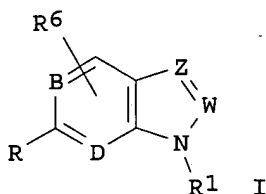
PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2001005758 | A2   | 20010125 | WO 2000-CA831   | 20000714 |
| WO 2001005758 | A3   | 20010719 |                 |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,

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SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
EP 1196380 A2 20020417 EP 2000-945511 20000714  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO  
JP 2003505369 T2 20030212 JP 2001-511419 20000714  
PRIORITY APPLN. INFO.: US 1999-354091 A 19990715  
WO 2000-CA831 W 20000714  
OTHER SOURCE(S): MARPAT 134:131423  
GI



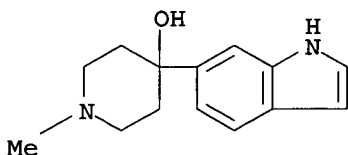
AB Title compds. [I; 1 of B,D = CH and the other = CH or N (W and Z .noteq. N); R = e.g., Z1NR2R3; R1 = H, alkyl, aryl, etc.; R2,R3 = H, (cyclo)alkyl, alkenyl, (un)substituted CH2Ph; NR2R3 = heterocyclyl; R6 = H, halo, alkyl, alkoxy, etc.; W = CH or N; Z = N or CR4; R4 = H or (cyclo)alkyl; Z1 = CH2, CH(OH), CO, etc.] were prepd. Thus, 6-chloroacetyl-1-pivaloylindole was aminated by Me2NH and the product treated with LAH to give 6-(2-dimethylaminoethyl)-1H-indole. Data for biol. activity of I were given.

IT 321744-84-7P 321744-85-8P 321744-86-9P  
321744-89-2P 321744-91-6P 321744-92-7P  
321744-97-2P 321744-98-3P 321744-99-4P  
321745-84-0P 321745-85-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of aminoalkylindoles and analogs as 5-HT1D receptor ligands)

RN 321744-84-7 CAPLUS

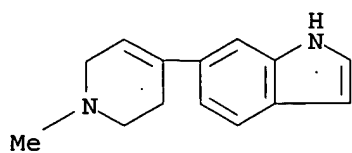
CN 4-Piperidinol, 4-(1H-indol-6-yl)-1-methyl- (9CI) (CA INDEX NAME)



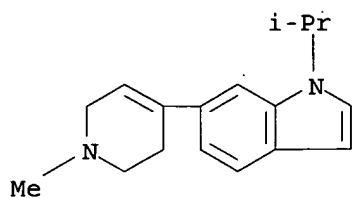
RN 321744-85-8 CAPLUS

CN 1H-Indole, 6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)- (9CI) (CA INDEX NAME)

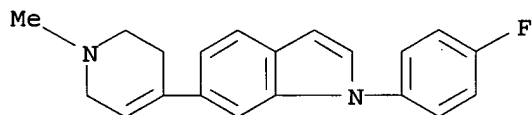
10/ 053,168



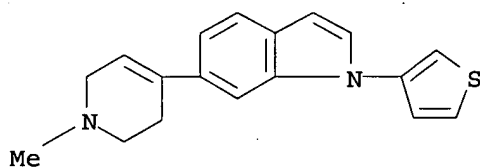
RN 321744-86-9 CAPLUS  
CN 1H-Indole, 1-(1-methylethyl)-6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)-  
(9CI) (CA INDEX NAME)



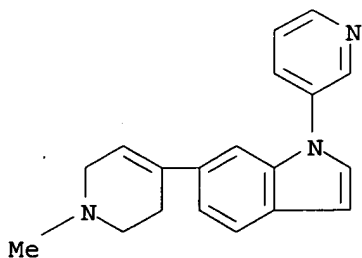
RN 321744-89-2 CAPLUS  
CN 1H-Indole, 1-(4-fluorophenyl)-6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)-  
(9CI) (CA INDEX NAME)



RN 321744-91-6 CAPLUS  
CN 1H-Indole, 6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)-1-(3-thienyl)-  
(9CI) (CA INDEX NAME)



RN 321744-92-7 CAPLUS  
CN 1H-Indole, 1-(3-pyridinyl)-6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)-  
(9CI) (CA INDEX NAME)

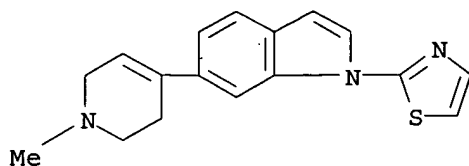


RN 321744-97-2 CAPLUS



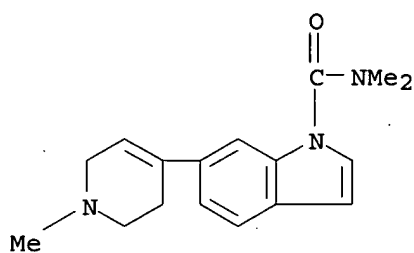
10/ 053,168

CN 1H-Indole, 6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)-1-(2-thiazolyl)-  
(9CI) (CA INDEX NAME)



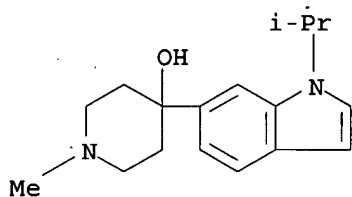
RN 321744-98-3 CAPLUS

CN 1H-Indole-1-carboxamide, N,N-dimethyl-6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)- (9CI) (CA INDEX NAME)



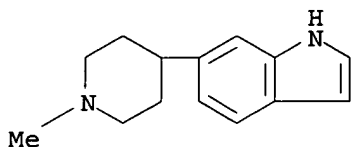
RN 321744-99-4 CAPLUS

CN 4-Piperidinol, 1-methyl-4-[1-(1-methylethyl)-1H-indol-6-yl]- (9CI) (CA INDEX NAME)



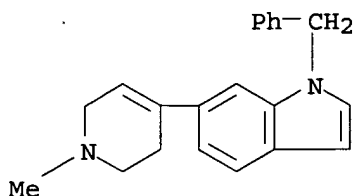
RN 321745-84-0 CAPLUS

CN 1H-Indole, 6-(1-methyl-4-piperidinyl)- (9CI) (CA INDEX NAME)



RN 321745-85-1 CAPLUS

CN 1H-Indole, 1-(phenylmethyl)-6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)-  
(9CI) (CA INDEX NAME)



L3 ANSWER 22 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:900647 CAPLUS

DOCUMENT NUMBER: 134:56657

TITLE: Preparation of substituted heterocycle fused gamma-carbolines

INVENTOR(S): Robichaud, Albert J.; Lee, Taekyu; Deng, Wei; Mitchell, Ian S.; Haydar, Simon; Chen, Wenting; McClung, Christopher D.; Calvello, Emilie J. B.; Zawrotny, David M.

PATENT ASSIGNEE(S): Du Pont Pharmaceuticals Company, USA

SOURCE: PCT Int. Appl., 764 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

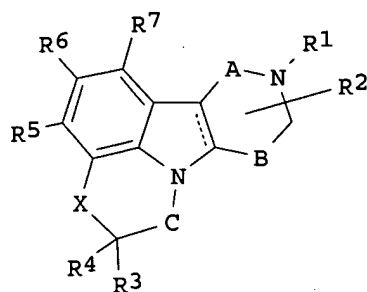
FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

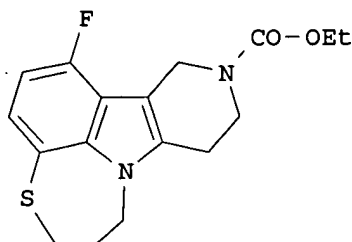
| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE       |
|---|------|----------|-----------------|------------|
| WO 2000077010   | A2   | 20001221 | WO 2000-US16373 | 20000615   |
| WO 2000077010   | A3   | 20010628 |                 |            |
| W: AU, BR, CA, CN, CZ, EE, HU, IL, IN, JP, KR, LT, LV, MX, NO, NZ, PL, RO, SG, SI, SK, TR, UA, VN, ZA |      |          |                 |            |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE                            |      |          |                 |            |
| EP 1192165  | A2   | 20020403 | EP 2000-942807  | 20000615   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO             |      |          |                 |            |
| BR 2000012411   | A    | 20020416 | BR 2000-12411   | 20000615   |
| JP 2003502336   | T2   | 20030121 | JP 2001-503867  | 20000615   |
| US 6548493  | B1   | 20030415 | US 2000-594008  | 20000615   |
| US 6552017  | B1   | 20030422 | US 2000-595250  | 20000615   |
| NO 2001006128   | A    | 20020211 | NO 2001-6128    | 20011214   |
| PRIORITY APPLN. INFO.:  |      |          | US 1999-139321P | P 19990615 |
|   |      |          | WO 2000-US16373 | W 20000615 |

OTHER SOURCE(S): MARPAT 134:56657

GI



I



II

AB Novel .gamma.-carboline compds. of formula I [R1, R2 = H, acyl, alkyl, cycloalkyl, etc.; R3, R4 = H, OH, amino, CF3, alkyl, etc.; R5-R7 = H, halo, CF3, OH, CN, alkyl, aryl, heterocycle, etc.; X = (substituted) NH, (substituted) CONH, (substituted) NHCO, S; A, B, C = (CH2)n, n = 0-3] are prepd. The invention is also concerned with pharmaceutical formulations comprising these novel compds. as active ingredients and the use of the novel compds. and their formulations in the treatment of certain disorders. The compds. of this invention are serotonin agonists and antagonists and are useful in the control or prevention of central nervous system disorders including obesity, anxiety, depression, psychosis, schizophrenia, sleep disorders, sexual disorders, migraine, conditions assocd. with cephalic pain, social phobias, and gastrointestinal disorders such as dysfunction of the gastrointestinal tract motility. Thus, II is prepd. starting from p-fluorophenol, .beta.-propiolactone and 1-carbethoxy-4-piperidone. Pharmaceutical compns. contg. I are described.

IT 313539-45-6P

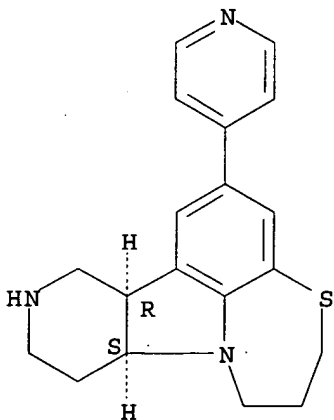
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of substituted heterocycle fused .gamma.-carboline as serotonin agonists and antagonists)

RN 313539-45-6 CAPLUS

CN 5H-Pyrido[3',4':4,5]pyrrolo[1,2,3-ef][1,5]benzothiazepine, 6,7,8a,9,10,11,12,12a-octahydro-2-(4-pyridinyl)-, (8aR,12aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



IT 313544-23-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

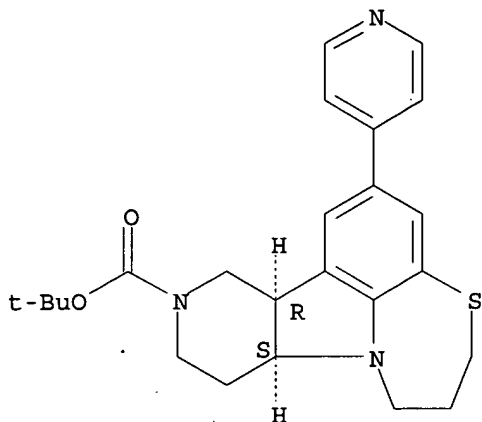
10/ 053,168

(prepn. of substituted heterocycle fused .gamma.-carbolines as  
serotonin agonists and antagonists)

RN 313544-23-9 CAPLUS

CN 5H-Pyrido[3',4':4,5]pyrrolo[1,2,3-ef][1,5]benzothiazepine-11(8aH)-  
carboxylic acid, 6,7,9,10,12,12a-hexahydro-2-(4-pyridinyl)-,  
1,1-dimethylethyl ester, (8aR,12aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L3 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:839088 CAPLUS

DOCUMENT NUMBER: 134:17402

TITLE: Preparation of 4-arylpiperidine derivatives for the  
treatment of pruritus

INVENTOR(S): Armer, Richard Edward; Bronk, Brian Scott; Gibson,  
Stephen Paul; Roberts, Lee Richard; Tommasini, Ivan;  
Verrier, Kimberley

PATENT ASSIGNEE(S): Pfizer Inc., USA; Pfizer Limited

SOURCE: Eur. Pat. Appl., 39 pp.

CODEN: EPXXDW

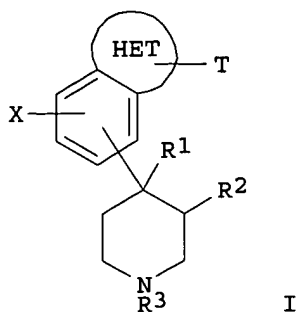
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE             | APPLICATION NO. | DATE        |
|--|------|------------------|-----------------|-------------|
| EP 1055668   | A1   | 20001129         | EP 2000-304227  | 20000518    |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO |      |                  |                 |             |
| US 6441000   | B1   | 20020827         | US 2000-573300  | 20000518    |
| JP 2001097972  | A2   | 20010410         | JP 2000-154475  | 20000525    |
| JP 2003034689  | A2   | 20030207         | JP 2002-142681  | 20000525    |
| CA 2309505   | AA   | 20001128         | CA 2000-2309505 | 20000526    |
| BR 2000002518  | A    | 20010102         | BR 2000-2518    | 20000529    |
| PRIORITY APPLN. INFO.:   |      |                  | GB 1999-12413   | A 19990528  |
|  |      |                  | JP 2000-154475  | A3 20000525 |
| OTHER SOURCE(S):   |      | MARPAT 134:17402 |                 |             |
| GI   |      |                  |                 |             |



AB The title compds. I [HET = 5-, 6- or 7-membered heterocyclic ring contg. at least one nitrogen atom, and optionally one or more heteroatoms selected from oxygen or sulfur; T = H, halo, OH, :O, C1-6 alkyl, C1-6 alkoxy, etc.; R1, R2 = H, alkyl; R3 = aryl alkyl, alkenyl, alkynyl; X = halo, alkyl, alkoxy], useful in the prophylaxis and in the treatment of diseases mediated by opiate receptors, such as pruritus, were prepd. E.g., a soln. of trans-4-(1-hexyl-3,4-dimethyl-4-piperidinyl)-1,2-benzenediamine (prepn. given) in 90% formic acid was heated to 100 .degree.C for 2 h to give trans-5-(1-hexyl-3,4-dimethyl-4-piperidinyl)-1H-benzimidazole. The opioid receptor binding assays of I for the p-receptor were detd.

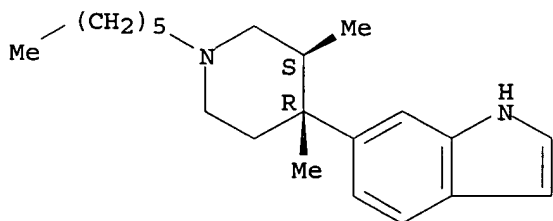
IT 309263-91-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of arylpiperidine derivs. for the treatment of pruritus)

RN 309263-91-0 CAPLUS

CN 1H-Indole, 6-[(3R,4S)-1-hexyl-3,4-dimethyl-4-piperidinyl]-, rel- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:799078 CAPLUS

DOCUMENT NUMBER: 134:127760

TITLE: Models of monoamine oxidase A and B active sites obtained by using 3D QSAR with ComFA analysis

AUTHOR(S): Tikhonova, O. V.; Veselovsky, A. V.; Medvedev, A. E.; Ivanov, A. S.

CORPORATE SOURCE: Institute of Biomedical Chemistry, Moscow, Russia

SOURCE: Molecular Simulation (2000), 24(4-6), 379-389

CODEN: MOSIEA; ISSN: 0892-7022

PUBLISHER: Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The monoamine oxidase catalyzes the oxidative deamination of neuroactive amines. This enzyme exists in two forms A and B, which differ by substrates preference and inhibitors specificity. Investigation of the structures of these enzymes and design new selective inhibitors are of greatly interesting since MAO A inhibitors are used in therapeutic practice as antidepressants and MAO B inhibitors - in the treatment Parkinson's diseases. The three dimension structures of monoamine oxidases are still unknown. Therefore, one of the most perspective approach to define significant features of structure of active site is method based on anal. of structure-activity relationship (3D QSAR) with comparison of mol. fields anal. (CoMFA) allowing to get the spatial distribution of important properties affecting the activity. In present study we investigate the structures of active sites MAO A and B using 16 pyrazinocarbazole derivs. in variant conformation. Majority of pyrazinocarbazole derivs. have a right conformation, but three of those is sufficiently flexible. The latters can be in two conformation types: long mols. (substitution accommodate along axis of main structure) and short mols. (substitution accommodate at acute angle about of main structure). Several 3D QSAR and CoMFA models of MAO A and B active sites were design for data sets contg. various types of flexible mols. conformation. All obtained models are statistical reliable and have sufficient predictive power for tested compd. tetrindole. The best MAO A model that include two flexible mols. in long conformations was obtained, and the longest one of those in short conformation. In contrast, for MAO B model contg. all flexible mols. in the short conformations is more preferred. On the basis of obtained data the schematic models of MAO A and B active sites structures are proposed. According to these models MAO A active site have the narrow long cavity that accommodate long mols., while MAO B active site is broader and shorter.

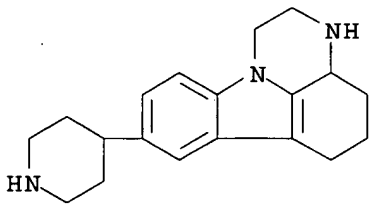
IT 219518-43-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(models of monoamine oxidase A and B active sites obtained by using 3D QSAR with CoMFA anal.)

RN 219518-43-1 CAPLUS

CN 1H-Pyrazino[3,2,1-jk]carbazole, 2,3,3a,4,5,6-hexahydro-8-(4-piperidinyl)-(9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:774146 CAPLUS

DOCUMENT NUMBER: 134:143706

TITLE: Selective inhibitors and computer modelling of the active site of monoamine oxidase

AUTHOR(S): Medvedev, A. E.; Ivanov, A. S.; Veselovsky, A. V.

CORPORATE SOURCE: Institute of Biomedical Chemistry, Russian Academy of Medical Sciences, Moscow, 119832, Russia

SOURCE: Neurobiology (Budapest) (2000), 8(2), 201-214

CODEN: NROBEZ; ISSN: 1216-8068

PUBLISHER: Akademiai Kiado

DOCUMENT TYPE: Journal

LANGUAGE: English

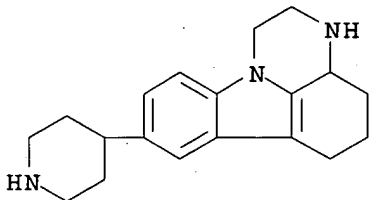
AB MAO inhibitors can be employed for computer modeling of the active site of MAO A and B. Competitive fully reversible MAO inhibitors with rigid structure and limited no. of conformers are preferential compds. for these studies. Among various isatin analogs with nearplanar structure selective MAO B inhibitors fit to 3D box of 8.5 .times. 5.1 .times. 1.8 .ANG., whereas 3D box of 14.2 .times. 5.6 .times. 1.8 .ANG. accommodates selective MAO A inhibitors. Validity of these data was tested using a series of pyrazinocarbazoles, analogs of short-acting antidepressant pirlindole. Rigid analogs exhibiting potent and selective inhibition of MAO A have 3D size limits of 13 .times. 7 .times. 4.4 .ANG.. Flexible analogs also demonstrated potent inhibition of MAO B and in contrast to rigid analogs their inhibitory activity did not show any dependence on 3D sizes. 3D-QSAR with CoMFA of isatin and pirlindole analogs of MAO A and B revealed differences in the models of MAO A and B.

IT 219518-43-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
(selective inhibitors and computer modeling of active site of monoamine oxidase)

RN 219518-43-1 .CAPLUS

CN 1H-Pyrazino[3,2,1-jk]carbazole, 2,3,3a,4,5,6-hexahydro-8-(4-piperidinyl)-(9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 26 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:456878 CAPLUS

DOCUMENT NUMBER: 133:89522

TITLE: Preparation of indole and indolizidine derivatives for the treatment of migraine

INVENTOR(S): Arora, Jalaj; Edwards, Louise; Isaac, Methvin; Maddaford, Shawn; Slassi, Abdelmalik; Tehim, Ashok; Xin, Tao

PATENT ASSIGNEE(S): Allelix Biopharmaceuticals Inc., Can.

SOURCE: PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2000038677   | A1   | 20000706 | WO 1999-CA1241  | 19991222 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,   |      |          |                 |          |

DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

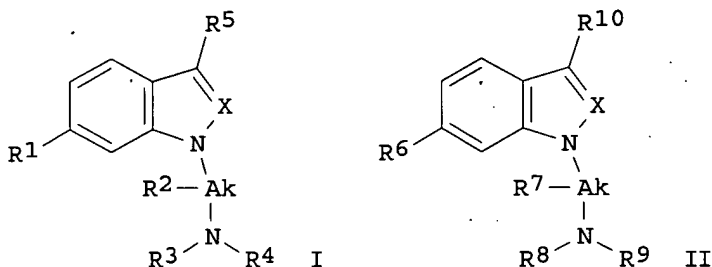
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|------------|----|----------|-----------------|----------|
| CA 2356638 | AA | 20000706 | CA 1999-2356638 | 19991222 |
| EP 1140074 | A1 | 20011010 | EP 1999-962019  | 19991222 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO

|               |    |          |                |          |
|---------------|----|----------|----------------|----------|
| US 6380242    | B1 | 20020430 | US 1999-469327 | 19991222 |
| JP 2002533391 | T2 | 20021008 | JP 2000-590631 | 19991222 |
| US 2002169322 | A1 | 20021114 | US 2002-73130  | 20020213 |

PRIORITY APPLN. INFO.:  
US 1998-113932P P 19981223  
US 1999-469327 A3 19991222  
WO 1999-CA1241 W 19991222

OTHER SOURCE(S): MARPAT 133:89522  
GI



AB The title compds. [I; X = N, CH; R1 = (un)substituted (un)satd. 5-7 membered monocyclic or benzo-fused heterocyclic ring; Ak = alkylene chain which may be substituted with R2 (wherein R2 = alkyl); R3, R4 = H, alkyl, alkenyl, etc.; or one pair of R2 and R3 or R3 and R4 together may form an alkylene or alkenylene bridge which, with the nitrogen atom, form (un)substituted 3-7 membered ring; R5 = H, alkyl, (un)satd. 4-7 membered carbocyclic or heterocyclic group], useful for the treatment of migraine, were prepd. and formulated. E.g., a multi-step synthesis of indole I [X = CH; R1 = tetrahydropyran-4-yl; Ak = (CH2)2; R3, R4 = Me; R5 = H] which showed inhibition of > 90% at the 5-HT1D receptor, was given. Also disclosed are novel compds. II [X = N, CH; R6 = (un)substituted (un)satd. 5-7 membered monocyclic or benzo-fused heterocyclic ring; Ak = alkylene chain which may be substituted with R7 (wherein R7 = alkyl); R8, R9 = H, alkyl, alkenyl, etc.; R10 = H, alkyl, (un)satd. 4-7 membered carbocyclic or heterocyclic group].

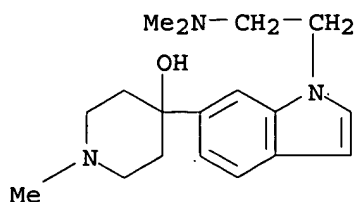
IT 281202-74-2P 281202-87-7P 281204-37-3P  
281204-40-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(prepn. of indoles and indolizidines for the treatment of migraine)

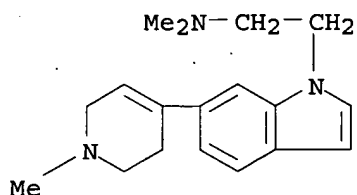
RN 281202-74-2 CAPLUS

CN 4-Piperidinol, 4-[1-[2-(dimethylamino)ethyl]-1H-indol-6-yl]-1-methyl-  
(9CI) (CA INDEX NAME)



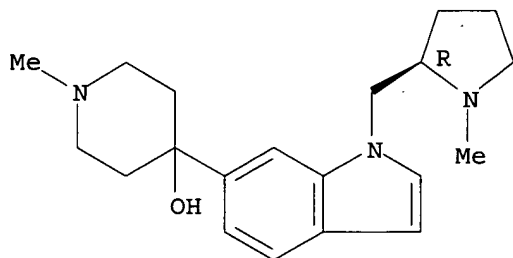


RN 281202-87-7 CAPLUS  
CN 1H-Indole-1-ethanamine, N,N-dimethyl-6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)- (9CI) (CA INDEX NAME)



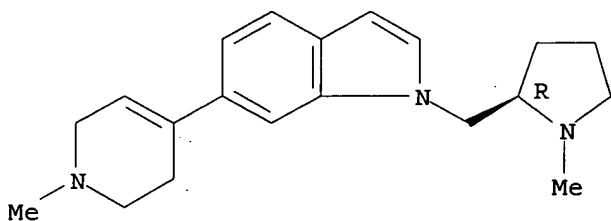
RN 281204-37-3 CAPLUS  
CN 4-Piperidinol, 1-methyl-4-[1-[[[(2R)-1-methyl-2-pyrrolidinyl]methyl]-1H-indol-6-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 281204-40-8 CAPLUS  
CN 1H-Indole, 1-[[[(2R)-1-methyl-2-pyrrolidinyl]methyl]-6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)- (9CI) (CA INDEX NAME)

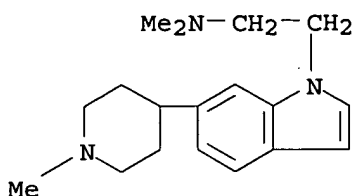
Absolute stereochemistry.



IT 281203-00-7P 281204-08-8P 281204-42-0P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of indoles and indolizidines for the treatment of migraine)  
RN 281203-00-7 CAPLUS

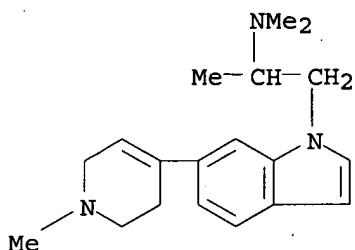
10/ 053,168

CN 1H-Indole-1-ethanamine, N,N-dimethyl-6-(1-methyl-4-piperidinyl)- (9CI)  
(CA INDEX NAME)



RN 281204-08-8 CAPLUS

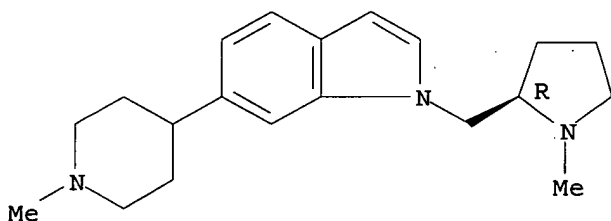
CN 1H-Indole-1-ethanamine, N,N,.alpha.-trimethyl-6-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 281204-42-0 CAPLUS

CN 1H-Indole, 6-(1-methyl-4-piperidinyl)-1-[[ (2R)-1-methyl-2-pyrrolidinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:210164 CAPLUS

DOCUMENT NUMBER: 132:251073

TITLE: Preparation of 3-(azabicycloalkyl)indoles as 5-HT1D receptor ligands

INVENTOR(S): Edwards, Louise; Slassi, Abdelmalik; Tehim, Ashok; Xin, Tao

PATENT ASSIGNEE(S): Allelix Biopharmaceuticals Inc., Can.

SOURCE: PCT Int. Appl., 74 pp.

CODEN: PIXXD2

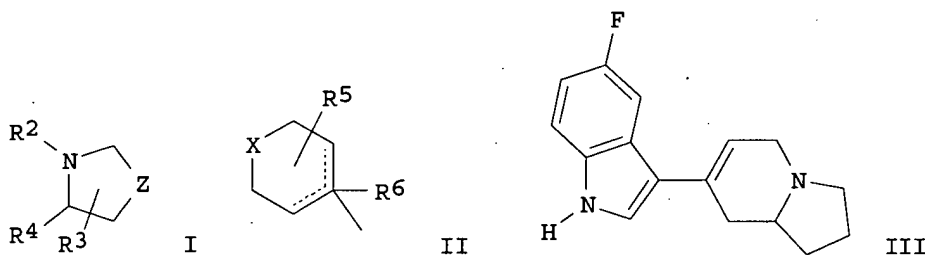
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE              | APPLICATION NO. | DATE       |
|---|------|-------------------|-----------------|------------|
| WO 2000017198   | A1   | 20000330          | WO 1999-CA833   | 19990913   |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |                   |                 |            |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |                   |                 |            |
| US 6562809  | B1   | 20030513          | US 1998-156496  | 19980918   |
| CA 2343391  | AA   | 20000330          | CA 1999-2343391 | 19990913   |
| AU 9956135  | A1   | 20000410          | AU 1999-56135   | 19990913   |
| EP 1114049  | A1   | 20010711          | EP 1999-942679  | 19990913   |
| EP 1114049  | B1   | 20030319          |                 |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |                   |                 |            |
| JP 2002526497   | T2   | 20020820          | JP 2000-574107  | 19990913   |
| AT 234837   | E    | 20030415          | AT 1999-942679  | 19990913   |
| PRIORITY APPLN. INFO.:  |      |                   | US 1998-156496  | A 19980918 |
|   |      |                   | WO 1999-CA833   | W 19990913 |
| OTHER SOURCE(S):  |      | MARPAT 132:251073 |                 |            |
| GI  |      |                   |                 |            |



AB Title compds. [I; R<sup>2</sup>R<sup>4</sup> = (un)substituted CH<sub>2</sub>CH<sub>2</sub>N(Z<sup>1</sup>R<sup>1</sup>)CH<sub>2</sub>, -CH<sub>2</sub>CHC(Z<sup>1</sup>R<sup>1</sup>)CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>C(Z<sup>1</sup>R<sup>1</sup>):CH; R<sup>1</sup> = H, halo, alkyl, alkoxy, heterocyclyl group II; R<sup>3</sup> = H, OH, alkyl, alkoxy, etc.; R<sup>5</sup> = H, OH, alkyl, alkoxy; R<sup>6</sup> = null when 1 of dashed lines = bond; R<sup>6</sup> = H, OH, alkoxy when dashed lines = null; X = O, S, (alkyl)imino, alkylidene, etc.; Z = (CH<sub>2</sub>)<sub>1-3</sub>; Z<sup>1</sup> = (1-alkyl) indole-3,5-diyl] were prepd. Thus, octahydroindolizin-7-one was condensed with 5-fluoro-1H-indole to give title compd III. Data for biol. activity of I were given.

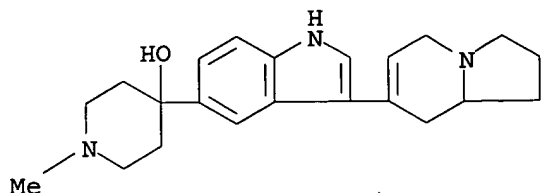
IT 262593-24-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

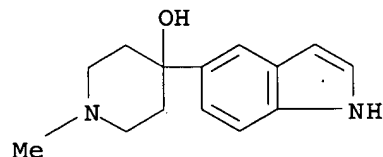
(prepn. of 3-(azabicycloalkyl)indoles as 5-HT<sub>1D</sub> receptor ligands)

RN 262593-24-8 CAPLUS

CN 4-Piperidinol, 4-[3-(1,2,3,5,8,8a-hexahydro-7-indoliziny)-1H-indol-5-yl]-1-methyl- (9CI) (CA INDEX NAME).



IT 262593-61-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of 3-(azabicycloalkyl)indoles as 5-HT1D receptor ligands)  
 RN 262593-61-3 CAPLUS  
 CN 4-Piperidinol, 4-(1H-indol-5-yl)-1-methyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 28 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:135316 CAPLUS

DOCUMENT NUMBER: 133:53138

TITLE: Inhibition of monoamine oxidase by pirlindole analogues: 3D-QSAR analysis

AUTHOR(S): Medvedev, A. E.; Ramsay, R. R.; Ivanov, A. S.; Veselovsky, A. S.; Shvedov, V. I.; Tikhonova, O. V.; Barradas, A.-P. V.; Davidson, C. K.; Moskvitina, T. A.; Fedotova, O. A.; Axenova, L. N.

CORPORATE SOURCE: Institute of Biomedical Chemistry, Moscow, Russia  
 SOURCE: Neurobiology (Budapest) (1999), 7(2), 151-158  
 CODEN: NROBEZ; ISSN: 1216-8068

PUBLISHER: Akademiai Kiado

DOCUMENT TYPE: Journal

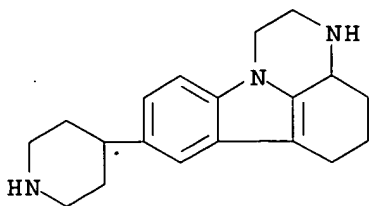
LANGUAGE: English

AB A series of pirlindole analogs were tested as inhibitors of monoamine oxidase A and B. Although we did not find strict dependence between 3D-size of mols. and their inhibitory potency, rigid analogs exhibited potent and selective inhibition of MAO-A. They have 3D size limits of 13 angstroms (length) .times. 7 angstroms (height) .times. 4.4 angstroms (widths). Besides MAO-A inhibition flexible analogs also demonstrated potent inhibition of MAO-B. Five compds. were studied as inhibitors of purified human liver MAO-A. Their inhibitory potencies coincided with those obtained using rat liver mitochondrial MAO-A. Each compd. induced changes in the spectrum of MAO-A but these did not correlate with the flexibility of the deriv. It is also possible that the oxygen bridge introduced with the flexibility might influence spectral patterns.

IT 219518-43-1  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
 (inhibition of monoamine oxidase by pirlindole analogs: 3D-QSAR anal.)

RN 219518-43-1 CAPLUS

CN 1H-Pyrazino[3,2,1-jk]carbazole, 2,3,3a,4,5,6-hexahydro-8-(4-piperidinyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 29 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:15012 CAPLUS

DOCUMENT NUMBER: 132:64175

TITLE: Preparation of piperidine derivatives having effects on serotonin related systems

INVENTOR(S): Hertel, Larry Wayne; Kohlmam, Daniel Timothy; Liang, Sidney Xi; Wong, David Taiwai; Xu, Yao-Chang

PATENT ASSIGNEE(S): Eli Lilly and Company, USA

SOURCE: PCT Int. Appl., 143 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

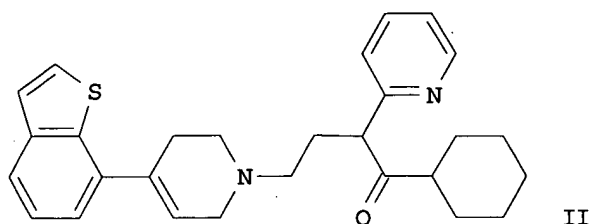
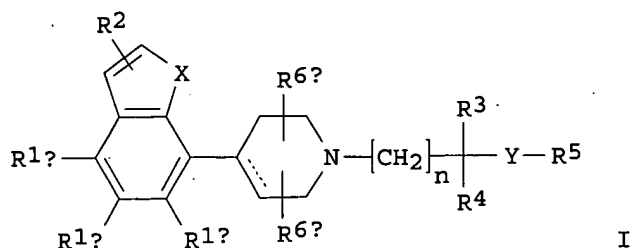
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE        |
|---|------|----------|-----------------|-------------|
| WO 2000000198   | A1   | 20000106 | WO 1999-US14732 | 19990629    |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |             |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |             |
| CA 2336117  | AA   | 20000106 | CA 1999-2336117 | 19990629    |
| AU 9947266  | A1   | 20000117 | AU 1999-47266   | 19990629    |
| EP 982304   | A1   | 20000301 | EP 1999-305095  | 19990629    |
| EP 982304   | B1   | 20021002 |                 |             |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |          |                 |             |
| EP 1146045  | A1   | 20011017 | EP 2001-202620  | 19990629    |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO   |      |          |                 |             |
| JP 2002519323   | T2   | 20020702 | JP 2000-556783  | 19990629    |
| AT 225345   | E    | 20021015 | AT 1999-305095  | 19990629    |
| ES 2181366  | T3   | 20030216 | ES 1999-305095  | 19990629    |
| US 6436964  | B1   | 20020820 | US 2000-701406  | 20001128    |
| PRIORITY APPLN. INFO.:  |      |          |                 |             |
|   |      |          | US 1998-91241P  | P 19980630  |
|   |      |          | EP 1999-305095  | A3 19990629 |
|   |      |          | WO 1999-US14732 | W 19990629  |

OTHER SOURCE(S): MARPAT 132:64175

GI



AB The title compds. [I; X = O, S, SO, SO<sub>2</sub>, NR; Y = CO, CH(OH), CH<sub>2</sub>, etc.; n = 1-4; R = H, alkyl; R<sub>1a</sub>, R<sub>1b</sub>, R<sub>1c</sub>, R<sub>2</sub> = H, F, Cl, Br, etc.; R<sub>3</sub> = O, OH, alkyl, etc.; R<sub>4</sub> = (un)substituted aryl, heterocyclyl, cycloalkyl, etc., R<sub>5</sub> = (un)substituted aryl, heterocyclyl, cycloalkyl, etc., R<sub>6a</sub>, R<sub>6b</sub> = H, alkyl] and their pharmaceutically acceptable salts, useful for inhibiting the reuptake of serotonin, antagonizing the 5-HT<sub>1A</sub> receptor and antagonizing the 5-HT<sub>2A</sub> receptor, and therefore useful in treating depression, were prepd. and formulated. E.g., a multi-step synthesis of tetrahydropyridine II.oxalate, was given. In general, compds. I are effective at 1-200 mg/day.

IT **253428-38-5P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of piperidine derivs. having effects on serotonin related systems)

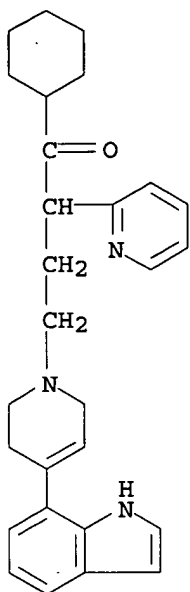
RN 253428-38-5 CAPLUS

CN 1-Butanone, 1-cyclohexyl-4-[3,6-dihydro-4-(1H-indol-7-yl)-1(2H)-pyridinyl]-2-(2-pyridinyl)-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 253428-37-4

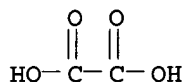
CMF C28 H33 N3 O



CM 2

CRN 144-62-7

CMF C2 H2 O4



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 30 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:819367 CAPLUS

DOCUMENT NUMBER: 132:49984

TITLE: Preparation of 4-, 5-, 6- and 7-indole and indoline derivatives as potent serotonin reuptake inhibitors and 5-HT1A antagonists

INVENTOR(S): Moltzen, Ejner Knud; Mikkelsen, Ivan; Krog-Jensen, Christian

PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.

SOURCE: PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| WO 9967237 | A1   | 19991229 | WO 1999-DK326   | 19990614 |

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,

*applicant is*

RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,  
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,  
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

|            |    |          |                 |          |
|------------|----|----------|-----------------|----------|
| CA 2335711 | AA | 19991229 | CA 1999-2335711 | 19990614 |
| AU 9943592 | A1 | 20000110 | AU 1999-43592   | 19990614 |
| BR 9911843 | A  | 20010320 | BR 1999-11843   | 19990614 |
| EP 1089997 | A1 | 20010411 | EP 1999-926281  | 19990614 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO

|               |    |          |                |          |
|---------------|----|----------|----------------|----------|
| NO 2000006460 | A  | 20010219 | NO 2000-6460   | 20001218 |
| BG 105136     | A  | 20010928 | BG 2001-105136 | 20010110 |
| US 6391882    | B1 | 20020521 | US 2001-719849 | 20010202 |
| US 2002128272 | A1 | 20020912 | US 2002-53168  | 20020115 |

PRIORITY APPLN. INFO.: DK 1998-820 A 19980619  
 US 1998-92823P P 19980714  
 WO 1999-DK326 W 19990614  
 US 2001-719849 A3 20010202

OTHER SOURCE(S): MARPAT 132:49984  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The title compds. [I; W = N, C, CH, COH; A = II (wherein X = O, S, N, etc.; Y = N, O, S, etc.; provided that X and Y are not both O or S), III (U = C, CH, N), IV; n = 0-5; m = 0-5; Z = CH<sub>2</sub>, O, S, etc.; R<sub>3</sub>-R<sub>9</sub>, R<sub>11</sub>, R<sub>12</sub> = H, halo, CN, etc.; R<sub>10</sub> = H, alkenyl, alkynyl, etc.] and their acid addn. salts, potent serotonin reuptake inhibitors and 5-HT<sub>1A</sub> receptor antagonists which are useful in treating of affective disorders, such as depression, psychosis, and anxiety disorders, were prepd. Thus, reaction of 2-(3-benzofuranyl)acetic acid with 1-(1H-indol-4-yl)piperazine in the presence of N,N-dicyclohexylcarbodiimide in THF/DMF followed by treatment of the resulting 1-(3-benzofuranyl)methylcarbonyl-4-(1H-indol-4-yl)piperazine with LiAlH<sub>4</sub> in THF afforded V.oxalate which showed IC<sub>50</sub> of 31 nM against serotonin reuptake.

IT 252977-98-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of 4-, 5-, 6- and 7-indole and indoline derivs. as potent serotonin reuptake inhibitors and 5-HT<sub>1A</sub> antagonists)

RN 252977-98-3 CAPLUS

CN 1H-Indole, 6-chloro-3-[2-[3,6-dihydro-4-(1H-indol-4-yl)-1(2H)-pyridinyl]ethyl]-, (2E)-2-butenedioate (2:3) (9CI) (CA INDEX NAME)

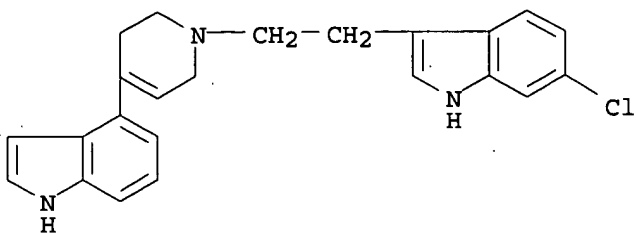
CM 1

CRN 252977-97-2

CMF C23 H22 Cl N3



10/ 053,168

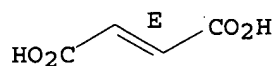


CM 2

CRN 110-17-8

CMF C4 H4 O4

Double bond geometry as shown.

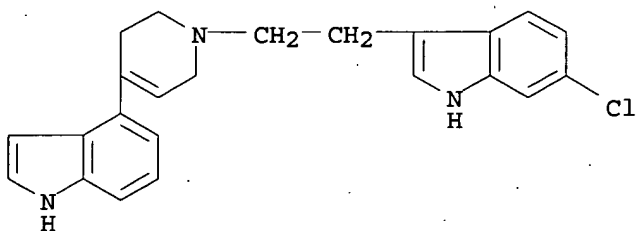


IT 252977-97-2P 252977-99-4P 252978-00-0P  
252978-50-0P 252978-51-1P 252978-60-2P  
252978-73-7P 252978-74-8P 252978-75-9P  
252978-77-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of 4-, 5-, 6- and 7-indole and indoline derivs. as potent serotonin reuptake inhibitors and 5-HT1A antagonists)

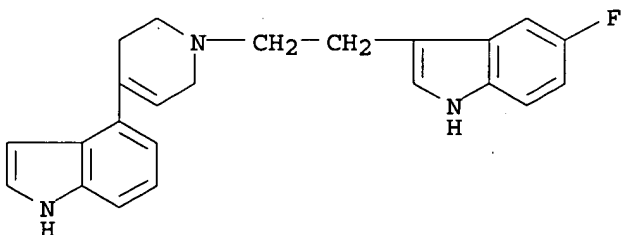
RN 252977-97-2 CAPLUS

CN 1H-Indole, 6-chloro-3-[2-[3,6-dihydro-4-(1H-indol-4-yl)-1(2H)-pyridinyl]ethyl]- (9CI) (CA INDEX NAME)



RN 252977-99-4 CAPLUS

CN 1H-Indole, 3-[2-[3,6-dihydro-4-(1H-indol-4-yl)-1(2H)-pyridinyl]ethyl]-5-fluoro- (9CI) (CA INDEX NAME)

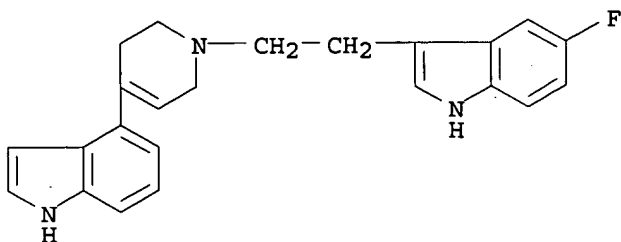


10/ 053,168

RN 252978-00-0 CAPLUS  
CN 1H-Indole, 3-[2-[3,6-dihydro-4-(1H-indol-4-yl)-1(2H)-pyridinyl]ethyl]-5-fluoro-, (2E)-2-butenedioate (1:3) (9CI) (CA INDEX NAME)

CM 1

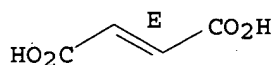
CRN 252977-99-4  
CMF C23 H22 F N3



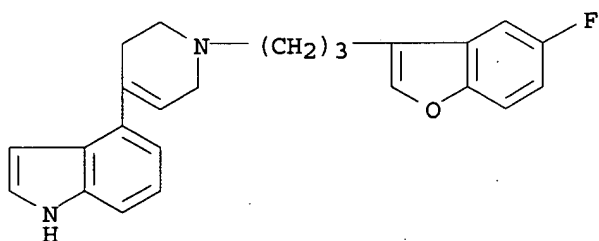
CM 2

CRN 110-17-8  
CMF C4 H4 O4

Double bond geometry as shown.



RN 252978-50-0 CAPLUS  
CN 1H-Indole, 4-[1-[3-(5-fluoro-3-benzofuranyl)propyl]-1,2,3,6-tetrahydro-4-pyridinyl]-, (9CI) (CA INDEX NAME)

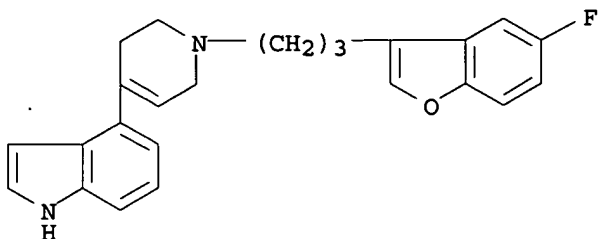


RN 252978-51-1 CAPLUS  
CN 1H-Indole, 4-[1-[3-(5-fluoro-3-benzofuranyl)propyl]-1,2,3,6-tetrahydro-4-pyridinyl]-, (2E)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 252978-50-0  
CMF C24 H23 F N2 O

10/ 053,168

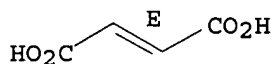


CM 2

CRN 110-17-8

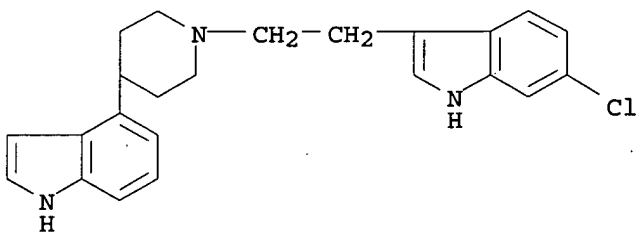
CMF C4 H4 O4

Double bond geometry as shown.



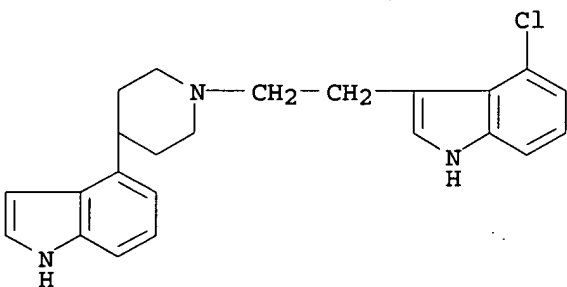
RN 252978-60-2 CAPLUS

CN 1H-Indole, 6-chloro-3-[2-[4-(1H-indol-4-yl)-1-piperidinyl]ethyl]- (9CI)  
(CA INDEX NAME)



RN 252978-73-7 CAPLUS

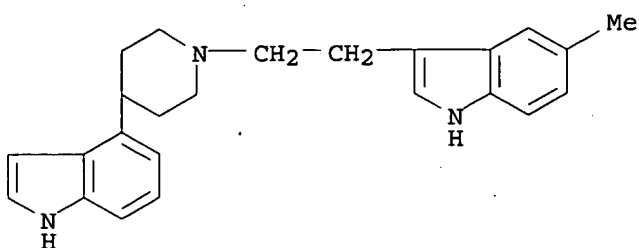
CN 1H-Indole, 4-chloro-3-[2-[4-(1H-indol-4-yl)-1-piperidinyl]ethyl]- (9CI)  
(CA INDEX NAME)



RN 252978-74-8 CAPLUS

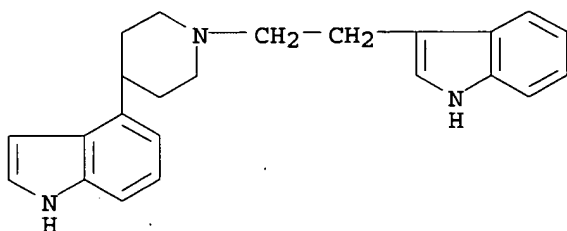
CN 1H-Indole, 3-[2-[4-(1H-indol-4-yl)-1-piperidinyl]ethyl]-5-methyl- (9CI)  
(CA INDEX NAME)

10/ 053,168



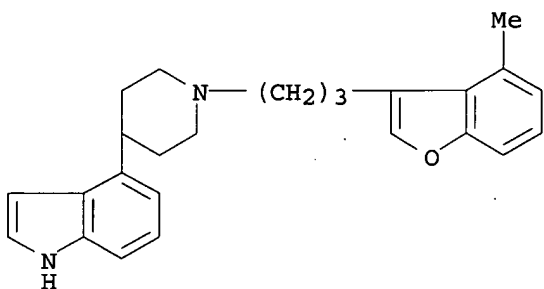
RN 252978-75-9 CAPLUS

CN 1H-Indole, 3-[2-[4-(1H-indol-4-yl)-1-piperidinyl]ethyl]- (9CI) (CA INDEX NAME)



RN 252978-77-1 CAPLUS

CN 1H-Indole, 4-[1-[3-(4-methyl-3-benzofuranyl)propyl]-4-piperidinyl]- (9CI) (CA INDEX NAME)



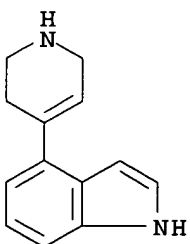
IT 252978-93-1P 252978-94-2P 252978-95-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of 4-, 5-, 6- and 7-indole and indoline derivs. as potent serotonin reuptake inhibitors and 5-HT1A antagonists)

RN 252978-93-1 CAPLUS

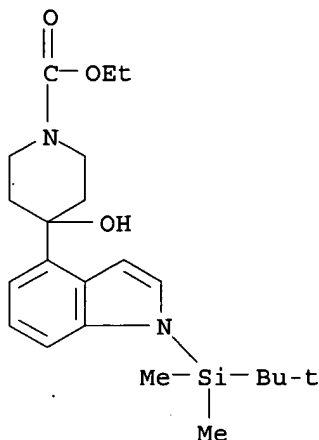
CN 1H-Indole, 4-(1,2,3,6-tetrahydro-4-pyridinyl)- (9CI) (CA INDEX NAME)



10/ 053,168

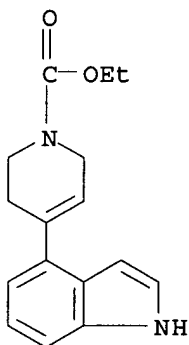
RN 252978-94-2 CAPLUS

CN 1-Piperidinecarboxylic acid, 4-[1-[(1,1-dimethylethyl)dimethylsilyl]-1H-indol-4-yl]-4-hydroxy-, ethyl ester (9CI) (CA INDEX NAME)



RN 252978-95-3 CAPLUS

CN 1(2H)-Pyridinecarboxylic acid, 3,6-dihydro-4-(1H-indol-4-yl)-, ethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:808573 CAPLUS

DOCUMENT NUMBER: 132:57127

TITLE: Imaging medium and process for producing an image

INVENTOR(S): Gaudiana, Russell A.; Haddock, Robert W.; Haque, Serajul; Kliman, Bloom Iris B.; Marshall, John L.; Ramos, Socorro M.; Takiff, Larry C.; Telfer, Stephen J.; Young, Michael A.

PATENT ASSIGNEE(S): Polaroid Corp., USA

SOURCE: U.S., 36 pp., Cont.-in-part of U.S. 5,631,118.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|            |    |          |                 |          |
|------------|----|----------|-----------------|----------|
| US 6004719 | A  | 19991221 | US 1997-858659  | 19970519 |
| US 5441850 | A  | 19950815 | US 1994-232725  | 19940425 |
| US 5631118 | A  | 19970520 | US 1995-430420  | 19950428 |
| WO 9824000 | A1 | 19980604 | WO 1997-US21856 | 19971126 |

W: CA, JP, US

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

|           |    |          |                |          |
|-----------|----|----------|----------------|----------|
| EP 951661 | A1 | 19991027 | EP 1997-947637 | 19971126 |
|-----------|----|----------|----------------|----------|

R: DE, FR, GB, IT, NL

|            |   |          |                |          |
|------------|---|----------|----------------|----------|
| US 6015907 | A | 20000118 | US 1997-979375 | 19971126 |
|------------|---|----------|----------------|----------|

PRIORITY APPLN. INFO.:

|                 |    |          |
|-----------------|----|----------|
| US 1994-232725  | A2 | 19940425 |
| US 1995-430420  | A2 | 19950428 |
| US 1996-757195  | A  | 19961127 |
| US 1997-858659  | A  | 19970519 |
| US 1997-944284  | A2 | 19971006 |
| WO 1997-US21856 | W  | 19971126 |

OTHER SOURCE(S): MARPAT 132:57127

AB A process for producing an image uses an imaging medium comprising an acid-generating layer or phase comprising a mixt. of a superacid precursor, a sensitizing dye and a secondary acid generator, and a color-change layer comprising an image dye. The sensitizing dye has 1st and 2nd forms, the 1st form having substantially greater substantial absorption in a 1st wavelength range than the 2nd form. The superacid precursor is not capable, in the absence of the 1st form of the sensitizing dye, of being decompd. by radiation in the 1st wavelength range. The secondary acid generator is capable of thermal decompn., catalyzed by superacid, to form a secondary acid. While at least part of the sensitizing dye is in its 1st form, the medium is imagewise exposed to radiation in the 1st wavelength range, thereby causing, in the exposed areas of the acid-generating layer, the formation of superacid. The medium is then heated to cause, in the exposed areas, thermal decompn. of the secondary acid generator, catalyzed by the superacid, and formation of the secondary acid. The components of the acid-generating and color-change layers or phases are then mixed so that the secondary acid causes a change in color of the image dye, and the sensitizing dye is converted to its 2nd form. The acid-generating layer or phase desirably includes a cosensitizer which is a reducing agent less basic than the secondary acid generator.

IT 252916-23-7P

RL: NUU (Other use, unclassified); PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (indicator dye for imaging medium and process for producing image)

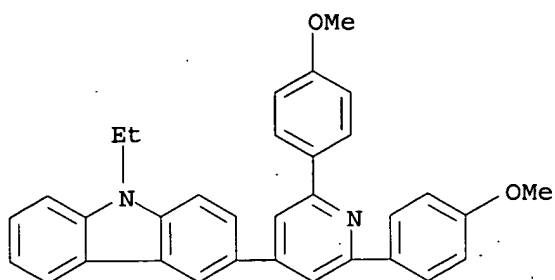
RN 252916-23-7 CAPLUS

CN Antimonate(1-), hexafluoro-, (OC-6-11)-, hydrogen, compd. with 3-[2,6-bis(4-methoxyphenyl)-4-pyridinyl]-9-ethyl-9H-carbazole (1:1) (9CI) (CA INDEX NAME)

CM 1

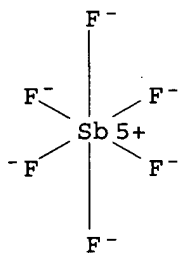
CRN 252916-22-6

CMF C33 H28 N2 O2



CM 2

CRN 16950-06-4  
 CMF F6 Sb . H  
 CCI CCS

H<sup>+</sup>

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 32 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:779222 CAPLUS

DOCUMENT NUMBER: 132:22868

TITLE: Preparation of 5-(hetero)cycloalkylindoles as 5-HT1D-like receptor agonists

INVENTOR(S): Slassi, Abdelmalik; Edwards, Louise; Meng, Qingchang; Rakhit, Sumanas

PATENT ASSIGNEE(S): Allelix Biopharmaceuticals, Inc., Can.

SOURCE: U.S., 30 pp.  
 CODEN: USXXAM

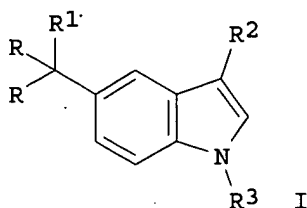
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------------------|------|----------|------------------|----------|
| US 5998438             | A    | 19991207 | US 1997-976103   | 19971121 |
| PRIORITY APPLN. INFO.: |      |          | US 1996-69887    | 19961126 |
| OTHER SOURCE(S):       |      |          | MARPAT 132:22868 |          |
| GI                     |      |          |                  |          |



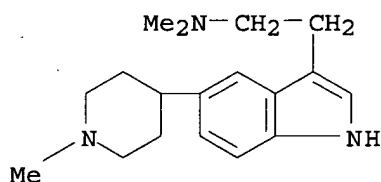
AB Title compds. [I; RR = atoms to complete an (un)substituted carbo- or heterocyclic ring; R1 = null, H, OH; R2 = CR5R6CH2NR7R8, 2- or 3-pyrrolidinyl, etc.; R3 = H or Bz; R5,R6 = H, OH, alkoxy; R7,R8 = H or alkyl; NR7R8 = heterocyclyl] were prepd. Thus, 5-bromoindole was treated with (COCl)<sub>2</sub> and the product amidated with Me<sub>2</sub>NH to give 5-bromo-3-(dimethylaminoglyoxyloyl)indole which was condensed with 1-cyclohexenyltributylstannane to give, after redn., I (RR = 1-cyclohexenyl, R1 = null, R2 = CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>, R3 = H). Data for biol. activity of I were given.

IT 251967-65-4P 251967-66-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of 5-(hetero)cycloalkylindoles as 5-HT<sub>1D</sub>-like receptor agonists)

RN 251967-65-4 CAPLUS

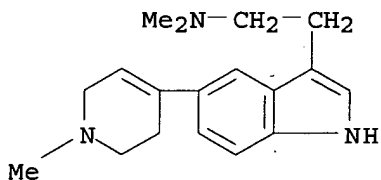
CN 1H-Indole-3-ethanamine, N,N-dimethyl-5-(1-methyl-4-piperidinyl)-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 251967-66-5 CAPLUS

CN 1H-Indole-3-ethanamine, N,N-dimethyl-5-(1,2,3,6-tetrahydro-1-methyl-4-pyridinyl)-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl



RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 33 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:645611 CAPLUS

DOCUMENT NUMBER: 132:49850

TITLE: Synthesis of pharmacologically active indoles

AUTHOR(S): Hishmat, O. H.; Ebeid, M. Y.; Nakkady, S. S.; Fathy, M. M.; Mahmoud, S. S.

CORPORATE SOURCE: Natural Products Department, National Research Centre, Cairo, Egypt

SOURCE: Bollettino Chimico Farmaceutico (1999), 138(6), 259-266

CODEN: BCFAAI; ISSN: 0006-6648

PUBLISHER: Societa Editoriale Farmaceutica

DOCUMENT TYPE: Journal

LANGUAGE: English

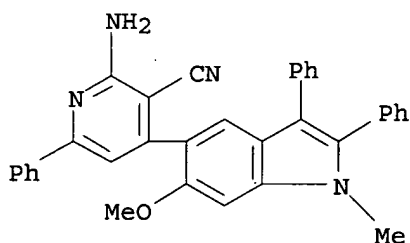
AB Formylation of 6-methoxy-1-methyl- (I) and 5-methyl-2,3-diphenyl-1H-indole (II) gave the 5- (III) and 6-carboxaldehyde derivs. (IV), resp., which were treated with Et cyanoacetate to form the corresponding 2-cyano-3-substituted acrylic acid Et esters. The latter compds. reacted with hydrazine hydrate, urea and thiourea to form the corresponding 5-amino-4-substituted 2,4-dihydropyrazol-3-one, 6-indolyl-2,4-dioxo-1,2,3,4-tetrahydropyrimidine-5-carbonitriles, and 6-indolyl-4-oxo-2-thioxo-1,2,3,4-tetrahydropyrimidine-5-carbonitriles. Reaction of the 5- and 6-carboxaldehyde derivs. with malononitrile afforded the 2-substituted malononitrile derivs. These reacted readily with arom. ketones to give the 2-amino-4,6-disubstituted nicotinonitriles. Several products, e.g., I-IV, were tested for antiinflammatory, ulcerogenic, and antispasmodic activities.

IT 252915-53-0P 252915-58-5P 252915-59-6P  
252915-60-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(pharmacol. active indoles)

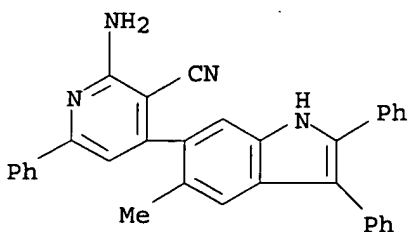
RN 252915-53-0 CAPLUS

CN 3-Pyridinecarbonitrile, 2-amino-4-(6-methoxy-1-methyl-2,3-diphenyl-1H-indol-5-yl)-6-phenyl- (9CI) (CA INDEX NAME)



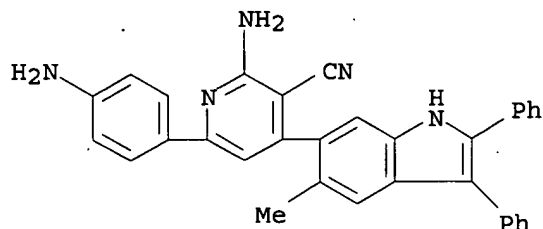
RN 252915-58-5 CAPLUS

CN 3-Pyridinecarbonitrile, 2-amino-4-(5-methyl-2,3-diphenyl-1H-indol-6-yl)-6-phenyl- (9CI) (CA INDEX NAME)

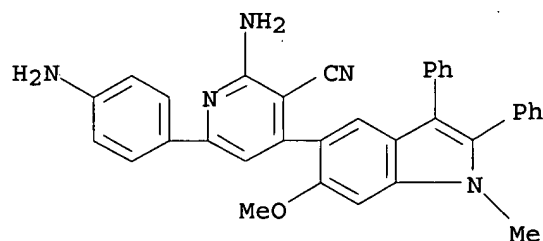


10/ 053,168

RN 252915-59-6 CAPLUS  
CN 3-Pyridinecarbonitrile, 2-amino-6-(4-aminophenyl)-4-(5-methyl-2,3-diphenyl-1H-indol-6-yl)- (9CI) (CA INDEX NAME)



RN 252915-60-9 CAPLUS  
CN 3-Pyridinecarbonitrile, 2-amino-6-(4-aminophenyl)-4-(6-methoxy-1-methyl-2,3-diphenyl-1H-indol-5-yl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:745030 CAPLUS

DOCUMENT NUMBER: 130:13915

TITLE: Indole derivatives having combined 5HT1A, 5HT1B, and 5HT1D receptor antagonist activity

INVENTOR(S): Gaster, Laramie Mary; Rami, Harshad Kantilal; Wyman, Paul Adrian

PATENT ASSIGNEE(S): Smithkline Beecham PLC, UK

SOURCE: PCT Int. Appl., 119 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

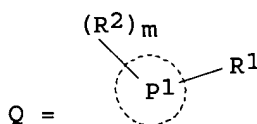
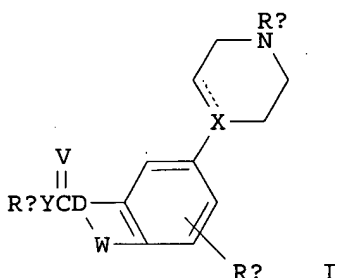
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND   | DATE     | APPLICATION NO. | DATE     |
|------------|--|----------|-----------------|----------|
| WO 9850358 | A1   | 19981112 | WO 1998-EP2262  | 19980414 |
| W:         | AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |          |
| RW:        | GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG   |          |                 |          |
| AU 9874310 | A1   | 19981127 | AU 1998-74310   | 19980414 |
| AU 732863  | B2   | 20010503 |                 |          |

EP 975593 A1 20000202 EP 1998-921462 19980414  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, FI  
 JP 2001524116 T2 20011127 JP 1998-547660 19980414  
 BR 9809092 A 20020122 BR 1998-9092 19980414  
 ZA 9803242 A 19991018 ZA 1998-3242 19980417  
 NO 9905065 A 19991015 NO 1999-5065 19991015  
 MX 9909583 A 20000331 MX 1999-9583 19991018  
 PRIORITY APPLN. INFO.: GB 1997-7829 A 19970418  
 GB 1998-1882 A 19980129  
 WO 1998-EP2262 W 19980414  
 OTHER SOURCE(S): MARPAT 130:13915  
 GI



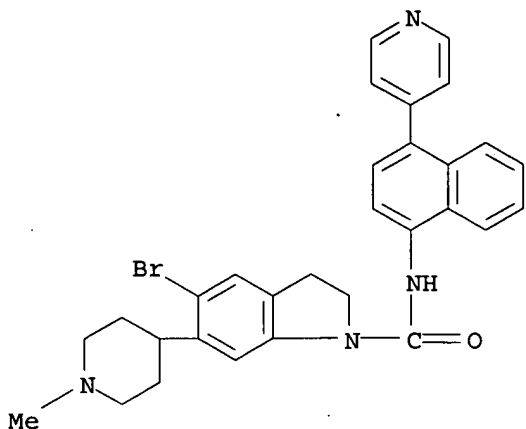
AB The title compds. I [Ra is a group of formula Q, in which P1 is Ph, bicyclic aryl, a 5- to 7-membered heterocyclic ring contg. 1 to 3 heteroatoms selected from oxygen, nitrogen and sulfur, or a bicyclic heterocyclic ring contg. 1 to 3 heteroatoms selected from oxygen, nitrogen and sulfur; R1 = H, halo, C1-6alkyl, C3-6cycloalkyl, COC1-6alkyl, C1-6alkoxy, hydroxy, hydroxyC1-6alkyl, hydroxyC1-6alkoxy, C1-6alkoxyC1-6alkoxy, C1-6alkanoyl, nitro, trifluoromethyl, cyano, SR9, SOR9, SO2R9, SO2NR10R11, CO2R10, CONR10R11, CO2NR10R11, CONR10(CH2)cCO2R11, (CH2)cNR10R11, (CH2)cCONR10R11, (CH2)cNR10COR11, (CH2)cCO2C1-6alkyl, CO2(CH2)cOR10, NR10R11, NR10CO2R11, NR10CONR10R11, CR10:NOR11, NR10COOR11, CNR10:NOR11, where R10 and R11 are independently hydrogen or C1-6alkyl and c is 1 to 4; R2 = H, halo, C1-6alkyl, C3-6cycloalkyl, C3-6cycloalkenyl, C1-6alkoxy, acyl, aryl, acyloxy, hydroxy, nitro, trifluoromethyl, cyano, CO2R10, CONR10R11, NR10R11 where R10 and R11 are as defined for R1; a is 1, 2 or 3; or Ra is a group contg. bridged rings; Y = NH, alkylamino, CH2, O; V = O, S; D = N, C, CH; W = (CR16R17)t where t = 2-4 and R16 and R17 = H, alkyl, etc.; Rb = H, halo, OH, etc.; Rc = H, alkyl] were prepd. and their 5HT1A, 5HT1B, and 5HT1D receptor binding detd. E.g., 5-methoxy-6-(4-methylpiperazin-1-yl)indole was treated with KOCMe3, then with 4-bromo-3-methylphenyl isocyanate to give 1-[(4-bromo-3-methylphenyl)aminocarbonyl]-5-methoxy-6-(4-methylpiperazin-1-yl)indole.

IT 216058-44-5P 216058-51-4P 216058-52-5P

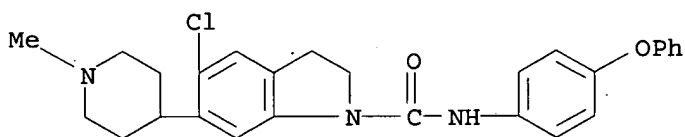
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of indole derivs. having combined 5HT1A, 5HT1B, and 5HT1D receptor antagonist activity)

RN 216058-44-5 CAPLUS

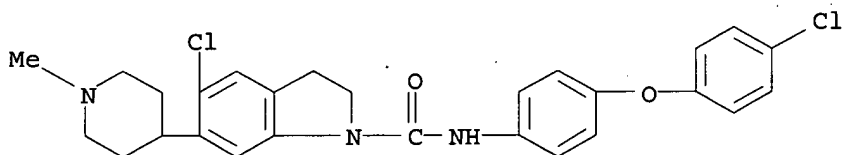
CN 1H-Indole-1-carboxamide, 5-bromo-2,3-dihydro-6-(1-methyl-4-piperidinyl)-N-[4-(4-pyridinyl)-1-naphthalenyl]- (9CI) (CA INDEX NAME)



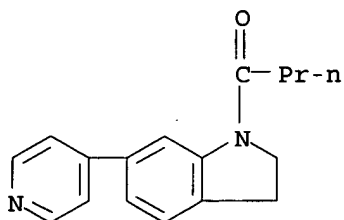
RN 216058-51-4 CAPLUS  
 CN 1H-Indole-1-carboxamide, 5-chloro-2,3-dihydro-6-(1-methyl-4-piperidinyl)-N-(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)



RN 216058-52-5 CAPLUS  
 CN 1H-Indole-1-carboxamide, 5-chloro-N-[4-(4-chlorophenoxy)phenyl]-2,3-dihydro-6-(1-methyl-4-piperidinyl)- (9CI) (CA INDEX NAME)



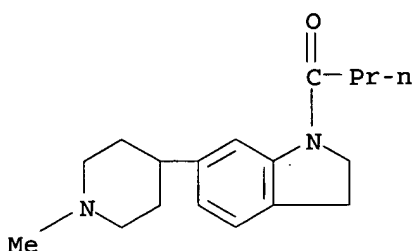
IT 216059-81-3P 216059-82-4P 216059-83-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of indole derivs. having combined 5HT1A, 5HT1B, and 5HT1D receptor antagonist activity)  
 RN 216059-81-3 CAPLUS  
 CN 1H-Indole, 2,3-dihydro-1-(1-oxobutyl)-6-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 216059-82-4 CAPLUS

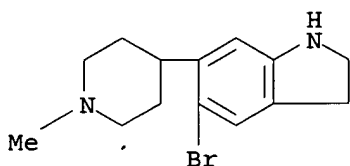
10/ 053,168

CN 1H-Indole, 2,3-dihydro-6-(1-methyl-4-piperidinyl)-1-(1-oxobutyl)- (9CI)  
(CA INDEX NAME)



RN 216059-83-5 CAPLUS

CN 1H-Indole, 5-bromo-2,3-dihydro-6-(1-methyl-4-piperidinyl)- (9CI) (CA  
INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 35 OF 35 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:713359 CAPLUS

DOCUMENT NUMBER: 130:90081

TITLE: Inhibition of Monoamine Oxidase by Pirlindole Analogs:  
3D-QSAR and CoMFA Analysis

AUTHOR(S): Medvedev, A. E.; Veselovsky, A. V.; Shvedov, V. I.;  
Tikhonova, O. V.; Moskvitina, T. A.; Fedotova, O. A.;  
Axenova, L. N.; Kamyshanskaya, N. S.; Kinkel, A. Z.;  
Ivanov, A. S.

CORPORATE SOURCE: Laboratory of Biochemistry of Amines and Laboratory of  
Molecular Graphics Drug Design Institute of Biomedical  
Chemistry, Russian Academy of Medical Sciences,  
Moscow, 119832, Russia

SOURCE: Journal of Chemical Information and Computer Sciences  
(1998), 38(6), 1137-1144  
CODEN: JCISD8; ISSN: 0095-2338

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A series of pyrazinocarbazoles, analogs of the short-acting antidepressant  
pirlindole (2,3,3a,4,5,6-hexahydro-8-methyl-1H-pyrazino[3,2,1-  
j,k]carbazole hydrochloride), were tested as inhibitors of monoamine  
oxidase A (MAO-A) and B (MAO-B). Rigid analogs exhibited potent and  
selective inhibition of MAO-A and have size limits (X:Y:Z) of 13.0 .times.  
7.0 .times. 4.4 .ANG.. Besides MAO-A inhibition flexible analogs also  
demonstrated potent inhibition of MAO-B and in contrast to rigid analogs  
their inhibitory activity did not show the dependence on these sizes. The  
qual. information (steric and electrostatic coeffs.) from the 3D-QSAR with  
CoMFA models for MAO-A and -B are different, and this information can be  
used to det. the structural features influencing inhibitor selectivity.

IT 219518-43-1

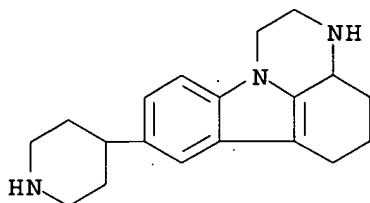
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

10/ 053,168

study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(3D-QSAR and CoMFA anal. in relation to inhibition of monoamine oxidase  
by Pirlindole analogs)

RN 219518-43-1 CAPLUS

CN 1H-Pyrazino[3,2,1-jk]carbazole, 2,3,3a,4,5,6-hexahydro-8-(4-piperidinyl)-  
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 12:05:21 ON 07 JUN 2003)

FILE 'REGISTRY' ENTERED AT 12:05:34 ON 07 JUN 2003

L1 STRUCTURE UPLOADED

L2 174 S L1 FUL

FILE 'CAPLUS' ENTERED AT 12:06:06 ON 07 JUN 2003

L3 35 S L2

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

160.43

308.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-22.79

-22.79

STN INTERNATIONAL LOGOFF AT 12:08:41 ON 07 JUN 2003